

**SOURCE RANKING DATABASE**  
**Volume 2: Appendices**

Revised Edition

Prepared for:

Economics, Exposure and Technology Division  
Office of Pollution Prevention and Toxics  
U.S. Environmental Protection Agency  
401 M Street, S.W.  
Washington, DC 20460

Under:

EPA Contract No. 68-D3-0013  
Work Assignment Nos. I-24, 2-28 and 2-44

EPA Contract No. 68-W6-0023  
Work Assignment No. I-3

EPA Contract No. 68-W6-0021  
Work Assignment No. 4-20

EPA Contract No. 68-W9-041  
Work Assignment Nos. 1-9 and 2-9

EPA Contract No. 68-W-99-041  
Work Assignment No. 4-14

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April 2003

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## **Appendix A**

### **Product Category File**

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Appendix A  
Product Category File

CAT_ID	CAT_DESC	SCHEME	ADD_NAME	ADD_DATE
2079	Edible Fats and Oils, n.e.c.	SIC4	VERSA	5/15/97
2273	Carpets and Rugs	SIC4	VERSA	5/15/97
2421	Sawmills and Planing Mills	SIC4	VERSA	5/15/97
2431	Millwork	SIC4	VERSA	5/15/97
2435	Hardwood Veneer and Plywood	SIC4	VERSA	5/15/97
2436	Softwood Veneer and Plywood	SIC4	VERSA	5/15/97
2439	Structural Wood Members, n.e.c.	SIC4	VERSA	5/15/97
2493	Reconstituted Wood Products	SIC4	VERSA	5/15/97
2521	Wood Office Furniture	SIC4	VERSA	5/15/97
2522	Office Furniture, Except Wood	SIC4	VERSA	5/15/97
2591	Drapery Hardware and Blinds and Shades	SIC4	VERSA	5/15/97
2679	Converted Paper Products, n.e.c.	SIC4	VERSA	5/15/97
2834	Pharmaceutical Preparations	SIC4	VERSA	5/15/97
2841	Soap and Other Detergents	SIC4	VERSA	5/15/97
2842	Polishes and Sanitation Goods	SIC4	VERSA	5/15/97
2843	Surfactants, Finishing Agents and Assistants	SIC4	VERSA	5/15/97
2844	Toilet Preparations	SIC4	VERSA	5/15/97
2851	Paints and Allied Products	SIC4	VERSA	5/15/97
2879	Agricultural Chemicals, n.e.c.	SIC4	VERSA	5/15/97
2891	Adhesives and Sealants	SIC4	VERSA	5/15/97
2893	Printing Ink	SIC4	VERSA	5/15/97
2899	Chemical Preparations, n.e.c.	SIC4	VERSA	5/15/97
2911	Petroleum Refining	SIC4	VERSA	5/15/97
2992	Lubricating Oils and Greases	SIC4	VERSA	5/15/97
2999	Petroleum and Coal Products, n.e.c.	SIC4	VERSA	5/15/97
3011	Tires and Inner Tubes	SIC4	VERSA	5/15/97
3069	Fabricated Rubber Products, n.e.c.	SIC4	VERSA	5/15/97
3086	Plastic Foam Products	SIC4	VERSA	5/15/97
3296	Mineral Wool	SIC4	VERSA	5/15/97
3951	Pens and Mechanical Pencils	SIC4	VERSA	5/15/97
3952	Lead Pencils and Art Goods	SIC4	VERSA	5/15/97
3996	Hard Surface Floor Coverings	SIC4	VERSA	5/15/97
20791	Shortening and cooking oils	SIC5	VERSA	5/15/97
22732	Tufted carpets and rugs	SIC5	VERSA	5/15/97
24212	Softwood lumber, rough and dressed, except s	SIC5	VERSA	5/15/97
24314	Wood doors, interior and exterior	SIC5	VERSA	5/15/97
24352	Prefinished hardwood plywood from purchased	SIC5	VERSA	5/15/97
24366	Softwood plywood (sanded)	SIC5	VERSA	5/15/97
24390	Fabricated structural wood products	SIC5	VERSA	5/15/97
24931	Particleboard	SIC5	VERSA	5/15/97
24933	Medium density fiberboard (MDF)	SIC5	VERSA	5/15/97
24934	Hardboard products made onsite	SIC5	VERSA	5/15/97
25210	Wood office furniture	SIC5	VERSA	5/15/97
25221	Office seating, including upholstered, excep	SIC5	VERSA	5/15/97
25913	Window shades and accessories	SIC5	VERSA	5/15/97
26791	Wall coverings	SIC5	VERSA	5/15/97
28340	Pharmaceutical preparations	SIC5	VERSA	5/15/97
28341	Pharmaceutical preparations affecting the en	SIC5	VERSA	5/15/97
28344	Pharmaceutical preparations acting on the re	SIC5	VERSA	5/15/97
28345	Pharmaceutical preparations acting on the di	SIC5	VERSA	5/15/97
28346	Pharmaceutical preparations acting on the sk	SIC5	VERSA	5/15/97
28348	Pharmaceutical preparations affecting parasi	SIC5	VERSA	5/15/97
28349	Pharmaceutical preparations for veterinary u	SIC5	VERSA	5/15/97
28411	Soaps and detergents, nonhousehold	SIC5	VERSA	5/15/97

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CAT_ID	CAT_DESC	SCHEME	ADD_NAME	ADD_DATE
28412	Household detergents	SIC5	VERSA	5/15/97
28413	Household soaps except specialty cleaners	SIC5	VERSA	5/15/97
28423	Specialty cleaning and sanitation products	SIC5	VERSA	5/15/97
28424	Polishing preparations and related products	SIC5	VERSA	5/15/97
28430	Surfactants, finishing agents and assistants	SIC5	VERSA	5/15/97
28440	Toilet preparations	SIC5	VERSA	5/15/97
28441	Shaving preparations	SIC5	VERSA	5/15/97
28442	Perfumes, toilet water, colognes	SIC5	VERSA	5/15/97
28443	Hair preparations (incl shampoos)	SIC5	VERSA	5/15/97
28444	Dentifrices, including mouthwashes, gargles	SIC5	VERSA	5/15/97
28446	Creams, lotions and oils	SIC5	VERSA	6/17/97
28447	Other cosmetics and toilet preparations	SIC5	VERSA	5/15/97
28510	Paint	SIC5	VERSA	6/17/97
28511	Architectural coatings	SIC5	VERSA	5/15/97
28512	Product finishes	SIC5	VERSA	5/15/97
28513	Special purpose coatings	SIC5	VERSA	5/15/97
28515	Miscellaneous allied paint products	SIC5	VERSA	5/15/97
28790	Agricultural chemicals, n.e.c.	SIC5	VERSA	5/15/97
28795	Insecticides for agric., garden and health s	SIC5	VERSA	5/15/97
28796	Herbicides for agric., garden and health ser	SIC5	VERSA	5/15/97
28797	Fungicides for agric., garden and health ser	SIC5	VERSA	5/15/97
28798	Other pesticidal preparations and agricultur	SIC5	VERSA	5/15/97
28799	Household pesticides incl industrial extermi	SIC5	VERSA	5/15/97
28913	Natural based glues and adhesives	SIC5	VERSA	5/15/97
28914	Synthetic resin and rubber adhesives	SIC5	VERSA	5/15/97
28917	Nonstructural caulking compounds and sealant	SIC5	VERSA	5/15/97
28931	Letterpress inks	SIC5	VERSA	5/15/97
28932	Lithographic and offset inks	SIC5	VERSA	5/15/97
28933	Gravure inks	SIC5	VERSA	5/15/97
28934	Flexographic inks	SIC5	VERSA	5/15/97
28935	Printing inks, n.e.c.	SIC5	VERSA	5/15/97
28995	Chemical preparations, n.e.c.	SIC5	VERSA	5/15/97
2911D	Finished petroleum products	SIC5	VERSA	6/17/97
29920	Lubricating oils and greases not made in a r	SIC5	VERSA	5/15/97
29990	Petroleum and coal products, n.e.c.	SIC5	VERSA	5/15/97
3011D	Tread rubber and tire repair materials	SIC5	VERSA	6/17/97
30694	Rubber floor and wall coverings	SIC5	VERSA	5/15/97
30863	Building and construction plastics foam prod	SIC5	VERSA	5/15/97
32961	Mineral wool for insulating homes, comm, and	SIC5	VERSA	5/15/97
39512	Markers	SIC5	VERSA	5/15/97
39524	Artists' equipment	SIC5	VERSA	5/15/97
39960	Resilient floor covering	SIC5	VERSA	5/15/97
2079100	Shortening and cooking oils	SIC7	VERSA	5/15/97
2273201	Scatter rugs, bathmats, and sets (rugs 6 x 9	SIC7	VERSA	5/15/97
2421200	Softwood lumber products (non-specific)	SIC7	VERSA	5/15/97
2431445	Flush type doors, solid composite core, hard	SIC7	VERSA	5/15/97
2435200	Prefinished hardwood plywood	SIC7	VERSA	5/15/97
2436600	Softwood plywood (non-specific)	SIC7	VERSA	5/15/97
2439098	Other fabricated structural wood products, i	SIC7	VERSA	5/15/97
2493103	Particleboard floor underlayment	SIC7	VERSA	5/15/97
2493105	Mobile home decking	SIC7	VERSA	5/15/97
2493120	Industrial particleboard (furniture, fixture	SIC7	VERSA	5/15/97
2493314	MDF, not coated or prefinished, standard pan	SIC7	VERSA	5/15/97
2493412	Standard basic hardboard (not machined or co	SIC7	VERSA	5/15/97

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CAT_ID	CAT_DESC	SCHEME	ADD_NAME	ADD_DATE
2493414	Tempered basic hardboard (not machined or co	SIC7	VERSA	5/15/97
2521000	Wood office furniture (non-specific)	SIC7	VERSA	5/15/97
2521011	Wood office secretarial chairs	SIC7	VERSA	5/15/97
2521073	Wood office work surfaces (modular systems)	SIC7	VERSA	5/15/97
2522114	Non-wood upholstered general office and desk	SIC7	VERSA	5/15/97
2522115	Non-wood upholstered office side and arm cha	SIC7	VERSA	5/15/97
2591311	Plastic window shades	SIC7	VERSA	5/15/97
2679100	Wall coverings (non-specific)	SIC7	VERSA	5/15/97
2834000	Pharmaceutical preparations	SIC7	VERSA	5/15/97
2834115	Local and topical corticoids	SIC7	VERSA	5/15/97
2834415	Bronchial dilator pharmaceutical preparation	SIC7	VERSA	5/15/97
2834450	Nonprescription decongestants	SIC7	VERSA	5/15/97
2834583	Contraceptive agents	SIC7	VERSA	5/15/97
2834611	Emollients and protectives, including burn r	SIC7	VERSA	5/15/97
2834618	Antidandruff and antiseborrheic preparations	SIC7	VERSA	5/15/97
2834619	Other dermatological preparations	SIC7	VERSA	5/15/97
2834630	External analgesics and counterirritants	SIC7	VERSA	5/15/97
2834637	Rubbing alcohol	SIC7	VERSA	5/15/97
2834639	Other external analgesics and counterirritan	SIC7	VERSA	5/15/97
2834698	Other pharmaceutical preparations acting on	SIC7	VERSA	5/15/97
2834841	Topical antibiotic preparations	SIC7	VERSA	5/15/97
2834865	Antifungal preparations	SIC7	VERSA	5/15/97
2834871	General antibacterials and antiseptics	SIC7	VERSA	5/15/97
2834900	Pharmaceuticals for veterinary use	SIC7	VERSA	5/15/97
2841121	Nonhousehold machine dishwashing detergents	SIC7	VERSA	5/15/97
2841125	Other alkaline nonhousehold detergents (liqu	SIC7	VERSA	5/15/97
2841126	Other alkaline nonhousehold detergents (dry	SIC7	VERSA	5/15/97
2841128	Other alkaline nonhousehold dry detergents	SIC7	VERSA	5/15/97
2841141	Nonhousehold synthetic detergents (dry, anio	SIC7	VERSA	5/15/97
2841143	Nonhousehold synthetic detergents (dry, nonn	SIC7	VERSA	5/15/97
2841146	Nonhousehold synthetic detergents (liquid, c	SIC7	VERSA	5/15/97
2841149	Nonhousehold synthetic detergents (liquid, n	SIC7	VERSA	5/15/97
2841167	Acid cleaners for dairy, farm, food plant et	SIC7	VERSA	5/15/97
2841177	Acid nonhousehold metal cleaners (liquid)	SIC7	VERSA	5/15/97
2841179	All other nonhousehold acid type cleaners	SIC7	VERSA	5/15/97
2841201	Household alkaline machine dishwashing deter	SIC7	VERSA	5/15/97
2841203	Household dry automatic dishwashing detergen	SIC7	VERSA	5/15/97
2841204	Household hard surface cleaners (liquid)	SIC7	VERSA	5/15/97
2841205	Household hard surface cleaners (aerosol)	SIC7	VERSA	5/15/97
2841206	Household hard surface cleaners (dry)	SIC7	VERSA	5/15/97
2841209	Household liquid scouring cleaners	SIC7	VERSA	5/15/97
2841211	Other alkaline household detergents	SIC7	VERSA	5/15/97
2841220	Household dry laundry detergents	SIC7	VERSA	5/15/97
2841221	Household synthetic light duty detergent (dr	SIC7	VERSA	5/15/97
2841224	Household synthetic heavy duty detergent (dr	SIC7	VERSA	5/15/97
2841226	Household synthetic heavy duty detergent (dr	SIC7	VERSA	5/15/97
2841230	Household liquid laundry detergents	SIC7	VERSA	5/15/97
2841231	Household synthetic light duty detergent (li	SIC7	VERSA	5/15/97
2841235	Household synthetic heavy duty detergent (li	SIC7	VERSA	5/15/97
2841261	Household laundry presoaks	SIC7	VERSA	5/15/97
2841313	Toilet soap excl medicated soaps (non-deodor	SIC7	VERSA	5/15/97
2841315	Toilet soap excl medicated soaps (liquid)	SIC7	VERSA	5/15/97
2841398	Other soaps incl mechanics and medicated (ba	SIC7	VERSA	5/15/97
2842311	Glass window cleaning preparations	SIC7	VERSA	5/15/97

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CAT_ID	CAT_DESC	SCHEME	ADD_NAME	ADD_DATE
2842315	Automotive windshield washer fluid	SIC7	VERSA	5/15/97
2842321	Oven cleaners	SIC7	VERSA	5/15/97
2842326	Toilet bowl cleaners	SIC7	VERSA	5/15/97
2842328	Drain pipe solvents	SIC7	VERSA	5/15/97
2842330	Bathroom tub and tile cleaners	SIC7	VERSA	5/15/97
2842332	Disinfectants (nonagricultural)	SIC7	VERSA	5/15/97
2842344	Fabric softeners (liquid)	SIC7	VERSA	5/15/97
2842348	Laundry starch preparations	SIC7	VERSA	5/15/97
2842349	Miscellaneous laundry aids (e.g., ironing ai	SIC7	VERSA	5/15/97
2842350	Rug and upholstery cleaners	SIC7	VERSA	5/15/97
2842351	Household rug and upholstery cleaners	SIC7	VERSA	5/15/97
2842353	Industrial and institutional rug and upholst	SIC7	VERSA	5/15/97
2842381	Deodorants/air fresheners (non-personal, aer	SIC7	VERSA	5/15/97
2842385	Deodorants/air fresheners (non-personal, non	SIC7	VERSA	5/15/97
2842397	Other specialty cleaning and sanitation prod	SIC7	VERSA	5/15/97
2842411	Automobile body polish and cleaners	SIC7	VERSA	5/15/97
2842415	Furniture polish and cleaners	SIC7	VERSA	5/15/97
2842420	Floor polish	SIC7	VERSA	5/15/97
2842421	Floor polish: water emulsion	SIC7	VERSA	5/15/97
2842423	Floor polish: liquid non-emulsion	SIC7	VERSA	5/15/97
2842443	Shoe polishes and cleaners	SIC7	VERSA	5/15/97
2842463	Leather dressings and finishes (excl shoe po	SIC7	VERSA	5/15/97
2842498	Other polishing preparations and related pro	SIC7	VERSA	5/15/97
2843000	Surfactants, finishing agents, and assistant	SIC7	VERSA	5/15/97
2843031	Textile assistant	SIC7	VERSA	5/15/97
2843061	Textile finishes	SIC7	VERSA	5/15/97
2844000	Toilet preparations	SIC7	VERSA	5/15/97
2844149	Shaving soap and cream	SIC7	VERSA	5/15/97
2844156	Aftershave preparations (all forms)	SIC7	VERSA	5/15/97
2844159	Other shaving prep incl preshave and styptic	SIC7	VERSA	5/15/97
2844200	Perfumes, toilet water, and colognes	SIC7	VERSA	5/15/97
2844211	Perfume oil mixtures and blends	SIC7	VERSA	5/15/97
2844223	Perfumes	SIC7	VERSA	5/15/97
2844235	Toilet waters	SIC7	VERSA	5/15/97
2844245	Colognes	SIC7	VERSA	5/15/97
2844300	Hair preparations (including shampoos)	SIC7	VERSA	5/15/97
2844310	Shampoos	SIC7	VERSA	5/15/97
2844315	Shampoo w/ synthetic organic deterg.(liquid,	SIC7	VERSA	5/15/97
2844318	Shampoo w/ synthetic organic detergent (crea	SIC7	VERSA	5/15/97
2844322	Hair tonics incl hair and scalp conditioners	SIC7	VERSA	5/15/97
2844326	Hair mousse	SIC7	VERSA	5/15/97
2844339	Commercial perms	SIC7	VERSA	5/15/97
2844341	Hair dressings incl brilliantines, creams, p	SIC7	VERSA	5/15/97
2844351	Hair coloring preparations (bleaches, dyes,	SIC7	VERSA	5/15/97
2844363	Hairspray (aerosol)	SIC7	VERSA	5/15/97
2844364	Hairspray (non-aerosol)	SIC7	VERSA	5/15/97
2844365	Hair rinses, except color rinses	SIC7	VERSA	5/15/97
2844395	Other hair preparations, including heat sett	SIC7	VERSA	5/15/97
2844421	Toothpaste, incl gels and tooth powder	SIC7	VERSA	5/15/97
2844498	Other oral hygiene products, incl dental flo	SIC7	VERSA	5/15/97
2844611	Cleansing creams	SIC7	VERSA	5/15/97
2844613	Foundation creams	SIC7	VERSA	5/15/97
2844617	Moisturizing creams	SIC7	VERSA	5/15/97
2844619	Other creams, except eye and manicuring crea	SIC7	VERSA	5/15/97

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CAT_ID	CAT_DESC	SCHEME	ADD_NAME	ADD_DATE
2844621	Suntan lotions and oils	SIC7	VERSA	5/15/97
2844622	Sunscreens and sunblocks	SIC7	VERSA	5/15/97
2844623	Cleansing lotions	SIC7	VERSA	5/15/97
2844624	Cosmetic oils, including baby oils	SIC7	VERSA	5/15/97
2844625	Hand lotions	SIC7	VERSA	5/15/97
2844626	Body lotions	SIC7	VERSA	5/15/97
2844629	Other lotions and oils, excl hair, shaving,	SIC7	VERSA	5/15/97
2844715	Blushers	SIC7	VERSA	5/15/97
2844721	Eye preparations (mascara, eye shadow, eye l	SIC7	VERSA	5/15/97
2844731	Underarm deodorants (aerosol and spray types	SIC7	VERSA	5/15/97
2844735	Underarm deodorants (roll-ons, solids, etc.)	SIC7	VERSA	5/15/97
2844741	Nail enamels and polishes	SIC7	VERSA	5/15/97
2844745	Nail enamel and polish removers	SIC7	VERSA	5/15/97
2844751	Other manicuring preparations	SIC7	VERSA	5/15/97
2844755	Talcum and toilet powder	SIC7	VERSA	5/15/97
2844765	Other powder, including foot powder, etc.	SIC7	VERSA	5/15/97
2844771	Bath salts, tablets, oils and bubble baths	SIC7	VERSA	5/15/97
2844775	Premoistened towelettes, incl wipes for babi	SIC7	VERSA	5/15/97
2844781	Facial scrubs and masks	SIC7	VERSA	5/15/97
2844795	Other cosmetics and toiletries	SIC7	VERSA	5/15/97
2851000	Paints and allied products	SIC7	VERSA	5/15/97
2851100	Architectural coatings	SIC7	VERSA	5/15/97
2851125	Solvent thinned exterior undercoaters and pr	SIC7	VERSA	5/15/97
2851137	Solvent thinned exterior stains incl shingle	SIC7	VERSA	5/15/97
2851141	Water thinned ext paints and tinting bases,	SIC7	VERSA	5/15/97
2851144	Water thinned exterior undercoaters and prim	SIC7	VERSA	5/15/97
2851149	Water thinned exterior stains	SIC7	VERSA	5/15/97
2851169	Semigloss, eggshell, satin solvent thinned i	SIC7	VERSA	5/15/97
2851171	Solvent thinned interior undercoaters and pr	SIC7	VERSA	5/15/97
2851175	Solvent thinned interior clear finishes	SIC7	VERSA	5/15/97
2851177	Solvent thinned interior stains	SIC7	VERSA	5/15/97
2851181	Flat water thinned interior paints and tinti	SIC7	VERSA	5/15/97
2851183	Semigloss, eggshell, satin water thinned int	SIC7	VERSA	5/15/97
2851186	Water thinned interior undercoaters and prim	SIC7	VERSA	5/15/97
2851188	Other interior water thinned coatings	SIC7	VERSA	5/15/97
2851267	Other indust. product finishes excl. pigment	SIC7	VERSA	5/15/97
2851311	Ground/traffic marking coatings	SIC7	VERSA	5/15/97
2851313	Auto, other transportation, and machinery re	SIC7	VERSA	5/15/97
2851331	Aerosol paint concentrates	SIC7	VERSA	5/15/97
2851500	Miscellaneous paint-related products	SIC7	VERSA	5/15/97
2851523	Paint and varnish removers	SIC7	VERSA	5/15/97
2851531	Paint thinners	SIC7	VERSA	5/15/97
2851598	Other miscellaneous allied paint products, i	SIC7	VERSA	5/15/97
2879000	Agricultural chemicals, n.e.c.	SIC7	VERSA	5/15/97
2879500	Insecticides for agric., garden and health s	SIC7	VERSA	5/15/97
2879600	Herbicides for agric., garden and health ser	SIC7	VERSA	5/15/97
2879700	Fungicides for agric., garden and health ser	SIC7	VERSA	5/15/97
2879885	Miscellaneous agricultural/pesticidal produc	SIC7	VERSA	5/15/97
2879900	Household pesticides	SIC7	VERSA	5/15/97
2879910	Insecticides for crawling insects	SIC7	VERSA	5/15/97
2879912	Insecticides for crawling insects (aerosols)	SIC7	VERSA	5/15/97
2879920	Insecticides for flying insects	SIC7	VERSA	5/15/97
2879930	Repellants and attractants	SIC7	VERSA	5/15/97
2879940	Insect repellants for human use	SIC7	VERSA	5/15/97

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CAT_ID	CAT_DESC	SCHEME	ADD_NAME	ADD_DATE
2879945	Pet flea and tick products, including collar	SIC7	VERSA	5/15/97
2891355	Vegetable adhesives: starches	SIC7	VERSA	5/15/97
2891400	Synthetic resin and rubber adhesives (non-sp	SIC7	VERSA	5/15/97
2891411	Epoxy adhesives	SIC7	VERSA	5/15/97
2891424	Phenolic and phenolic derivative adhesives	SIC7	VERSA	5/15/97
2891441	Polyvinyl acetate (latex type) adhesives	SIC7	VERSA	5/15/97
2891448	Rubber and synthetic resin combinations	SIC7	VERSA	5/15/97
2891453	Acrylic adhesives	SIC7	VERSA	5/15/97
2891471	Adhesive films, all types, incl pressure sen	SIC7	VERSA	5/15/97
2891499	Other synthetic resin and rubber adhesives	SIC7	VERSA	5/15/97
2891700	Nonstructural caulking compounds and sealant	SIC7	VERSA	5/15/97
2891711	Caulks, modified and unmodified oil base	SIC7	VERSA	5/15/97
2891721	Caulks, bituminous base (coal tar, asphalt)	SIC7	VERSA	5/15/97
2891731	General performance sealants (PVAC, butyl, v	SIC7	VERSA	5/15/97
2891746	Specialty performance sealants	SIC7	VERSA	5/15/97
2891771	Preformed tapes (butyl, polybutene, polyisob	SIC7	VERSA	5/15/97
2893100	Letterpress inks (non-specific)	SIC7	VERSA	5/15/97
2893105	Letterpress news inks	SIC7	VERSA	5/15/97
2893115	Letterpress packaging inks	SIC7	VERSA	5/15/97
2893200	Lithographic and offset inks (non-specific)	SIC7	VERSA	5/15/97
2893231	News and nonheat web offset inks	SIC7	VERSA	5/15/97
2893232	Publication and commercial web inks	SIC7	VERSA	5/15/97
2893235	Sheet-fed packaging inks	SIC7	VERSA	5/15/97
2893244	Sheet-fed general inks	SIC7	VERSA	5/15/97
2893246	Other lithographic and offset inks	SIC7	VERSA	5/15/97
2893300	Gravure inks (non-specific)	SIC7	VERSA	5/15/97
2893341	Gravure packaging inks: solvent types	SIC7	VERSA	5/15/97
2893344	Gravure publication inks: solvent types	SIC7	VERSA	5/15/97
2893349	Other gravure inks	SIC7	VERSA	5/15/97
2893400	Flexographic inks (non-specific)	SIC7	VERSA	5/15/97
2893482	Flexographic packaging inks: solvent types	SIC7	VERSA	5/15/97
2893483	Flexographic packaging inks: water types	SIC7	VERSA	5/15/97
2893487	Flexographic news and commercial inks	SIC7	VERSA	5/15/97
2893489	Other flexographic inks	SIC7	VERSA	5/15/97
2893585	Screen printing inks	SIC7	VERSA	5/15/97
2899534	Antifreeze preparations	SIC7	VERSA	5/15/97
2899543	Other automotive chemicals	SIC7	VERSA	5/15/97
2899572	Inks, writing and stamp pad inks (excl drawi	SIC7	VERSA	5/15/97
2899573	Chemical products for pools, hot tubs, etc.	SIC7	VERSA	5/15/97
2899581	Waterproofing compounds	SIC7	VERSA	5/15/97
2899593	Lighter fluids (cigarette, charcoal, etc.)	SIC7	VERSA	5/15/97
2899597	Other industrial chemical specialty products	SIC7	VERSA	5/15/97
2911D57	Misc. use aromatics	SIC7	VERSA	6/17/97
2992021	Lubricating oils	SIC7	VERSA	5/15/97
2992031	Lubricating greases	SIC7	VERSA	5/15/97
2999098	Petroleum products, n.e.c.	SIC7	VERSA	5/15/97
3011D39	Misc. tire repair materials	SIC7	VERSA	6/17/97
3069426	Other rubber floor and wall coverings incl c	SIC7	VERSA	5/15/97
3086310	Building and construction plastic foam insul	SIC7	VERSA	5/15/97
3296111	Loose mineral wool fiber (blowing and pourin	SIC7	VERSA	5/15/97
3296130	Mineral wool building batts, blankets and ro	SIC7	VERSA	5/15/97
3296161	Acoustical mineral wool, such as wall and ce	SIC7	VERSA	5/15/97
3951200	Markers, fine point and broad tipped	SIC7	VERSA	5/15/97
3952419	Other art materials incl clay, water & tempe	SIC7	VERSA	5/15/97



Appendix A  
Product Category File

<b>CAT_ID</b>	<b>CAT_DESC</b>	<b>SCHEME</b>	<b>ADD_NAME</b>	<b>ADD_DATE</b>
3996011	Sheet vinyl flooring	SIC7	VERSA	5/15/97
3996021	Vinyl floor tile	SIC7	VERSA	5/15/97
3996026	Plain backed vinyl composition tile	SIC7	VERSA	5/15/97
3996026	Plain backed vinyl composition tile	SIC7	VERSA	5/15/97

## **Appendix B**

### **Product-Formulation File**

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Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
207910000	OA90-1628	CBI668455	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-1630	CBI807685	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-1634	CBI700963	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-1646	CBI296063	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-16683	CBI338756	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-2546	CBI680002	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-33211	CBI392638	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-6168	CBI409440	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-882	CBI834847	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9503	CBI149049	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9505	CBI80305	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9508	CBI679239	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9511	CBI208630	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9513	CBI378519	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9516	CBI197881	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9518	CBI368661	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9520	CBI824953	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9523	CBI448944	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9526	CBI52518	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9529	CBI607646	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9531	CBI547421	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9533	CBI658165	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9535	CBI663269	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9538	CBI112689	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9540	CBI764490	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9542	CBI202274	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9544	CBI802933	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9546	CBI263711	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9548	CBI544043	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9550	CBI251863	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9553	CBI269492	T	T	F	F	F	F	T	T	F	P	3	
207910000	OA90-9556	CBI597196	T	T	F	F	F	F	T	T	F	P	3	
227320100	RAD93012	Nylon carpet w/polypropylene backing	T	T	T	T	T	T	T	T	M	4		
227320100	RAD93013	Nylon carpet w/polypropylene&PVC backin	T	T	T	T	T	T	T	T	M	4		
227320100	RAD93014	Nylon carpet w/polypropyl&polyureth bac	T	T	T	T	T	T	T	T	M	4		
227320100	RAD93015	Nylon carpet w/SBR latex backing	T	T	T	T	T	T	T	T	M	4		
227320100	RAD93016	Nylon carpet w/polypropyl&SBR latex bac	T	T	T	T	T	T	T	T	M	4		
227320100	RAD93017	Polypropylene carpet	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA032	Carpet (catalyst 30; style49109)	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA033	Carpet (Synergy 26,Enhancer III+)	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA064	Carpet-Titan w/2080P Taylor adhesive	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA065	Carpet-N8895 w/2080P Taylor adhesive	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA066	Carpet-Factor w/2080P Taylor adhesive	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA067	Carpet tile-#930416-B w/adhesive 2027	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA071	Carpet tile-#930317-A	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA072	Carpet tile-#930330A w/N5000 Sureset ad	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA073	Carpet tile-#930330B w/N5000 Sureset ad	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA074	Carpet tile-#930330C w/N5000 Sureset ad	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA075	Carpet tile-#930330D w/N5000 Sureset ad	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA076	Carpet tile-#930304B w/N5000 Sureset ad	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA077	Carpet tile-#930304C w/N5000 Sureset ad	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA078	Carpet - Networx	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA086	Urethane carpet	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA091	Carpet tile-Facet/3 ply-blue color	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA093	Carpet tile	T	T	T	T	T	T	T	T	M	4		
227320100	WADGA094	Networx modular carpet	T	T	T	T	T	T	T	T	M	4		
242120000	RAD93018	Softwood lumber (unspecified type)	T	T	T	T	T	T	T	F	M	4		
243144500	WADGA063	Particleboard core door w/veneer	T	T	T	T	T	T	T	F	M	4		
243520000	RAD93028	Hardwood plywood paneling(HUD compliant)	T	T	T	T	T	T	T	F	M	4		
243520000	RAD93029	Hardwood plywd ind panel(HUD compliant)	T	T	T	T	T	T	T	F	M	4		
243660000	RAD93027	U-F Softwood plywood (unspecified type)	T	T	T	T	T	T	T	F	M	4		

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
243909800	WADGA082	3M Self-leveling floor	F	F	F	F	T	F	F	F	F	M	4	
243909800	WADGA084	laminate sub-floor	F	F	F	F	T	F	F	F	F	M	4	
243909800	WADGA087	Regular sub-floor	F	F	F	F	T	F	F	F	F	M	4	
249310300	RAD93020	Floor underlayment	T	F	F	F	F	F	F	F	F	M	4	
249310500	RAD93019	Manufactured home decking	T	F	F	F	F	F	F	F	F	M	4	
249312000	RAD93021	Industrial particleboard	T	T	T	T	T	T	T	T	T	F	M	4
249312000	RAD93022	Particleboard	T	T	T	T	T	T	T	T	T	F	M	4
249331400	RAD93023	Medium density fiberboard	T	T	T	T	T	T	T	T	T	F	M	4
249331400	RAD93024	Medium density fiberboard(NPA compliant	T	T	T	T	T	T	T	T	T	F	M	4
249341200	RAD93025	Hardboard (basic-standard)	T	T	T	T	T	T	T	T	T	F	M	4
249341400	RAD93026	Hardboard (basic-tempered)	T	T	T	T	T	T	T	T	T	F	M	4
252100000	WADGA037	Furniture composite (built-in furniture	F	F	T	T	T	F	F	T	F	M	4	
252100000	WADGA069	Laminate glued to particleboard	F	F	T	T	T	F	F	T	F	M	4	
252101100	WADGA095	Comfort secretarial/task chair	T	T	T	T	T	T	T	T	F	M	4	
252107300	WADGA001	Complete workstation	F	T	T	T	T	F	T	F	F	M	4	
252107300	WADGA002	Complete workstation	F	T	T	T	T	F	T	F	F	M	4	
252107300	WADGA003	Complete workstatio	F	T	T	T	T	F	T	F	F	M	4	
252107300	WADGA004	Complete workstatio	F	T	T	T	T	F	T	F	F	M	4	
252211400	WADGA053	Chair (model 454-381m concentrx)	F	T	T	T	T	F	F	F	F	M	4	
252211400	WADGA056	Chair (model 458 office chair)	F	T	T	T	T	F	F	F	F	M	4	
252211400	WADGA057	Chair (neutral posture chair)	F	T	T	T	T	F	F	F	F	M	4	
252211500	WADGA054	Chair (model 421-480m side chair)	F	T	T	T	T	F	F	F	F	M	4	
252211500	WADGA055	Chair (comfort lowback & manager's)	F	T	T	T	T	F	F	F	F	M	4	
259131100	WADGA068	Levelor window shade (polyester & vinyl	T	T	T	T	T	T	T	T	T	F	M	4
267910000	RAD93008	Vinyl coated wallpaper	T	T	T	T	T	T	T	T	T	F	M	4
267910000	WADGA051	Vicertex (sigm Ecrú) vinyl wallcovering	T	T	T	T	T	T	T	T	T	F	M	4
267910000	WADGA085	Vinyl wallcovering	T	T	T	T	T	T	T	T	T	F	M	4
283400000	OA90-17288	CBI313297	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-17290	CBI257750	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-17292	CBI108820	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-17660	CBI819055	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-17662	CBI2733	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-17670	CBI458108	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-17672	CBI846341	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-20420	CBI921590	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-20422	CBI643079	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-20424	CBI703802	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-21215	CBI377441	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2182	CBI781105	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2184	CBI65144.	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2186	CBI851018	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2189	CBI490135	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2192	CBI68541	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2194	CBI236750	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2196	CBI35010	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2198	CBI680802	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2201	CBI594840	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2203	CBI406080	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2206	CBI177319	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2208	CBI681524	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2210	CBI250020	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2212	CBI723202	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2214	CBI473835	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2216	CBI701969	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2455	CBI36395	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-2902	CBI188264	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-29050	CBI28967	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-29052	CBI713047	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-29056	CBI813101	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-29058	CBI389578	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-35472	CBI125327	T	F	T	T	F	F	T	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
283400000	OA90-35476	CBI97242	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-4260	CBI934515	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-42754	CBI589626	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-4485	CBI212122	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-4763	CBI672030	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-6474	CBI662716	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-8816	CBI368751	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-8819	CBI914089	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-9442	CBI307928	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-9467	CBI203493	T	F	T	T	F	F	T	F	F	P	3	
283400000	OA90-9566	CBI614452	T	F	T	T	F	F	T	F	F	P	3	
283411500	OA90-37453	CBI730211	T	F	T	T	F	F	T	F	F	P	3	
283411500	OA90-8519	CBI369359	T	F	T	T	F	F	T	F	F	P	3	
283411500	OA90-8522	CBI86766	T	F	T	T	F	F	T	F	F	P	3	
283441500	RAD03901	Beta-Adrenergic Bronchodilator	T	T	T	T	T	T	T	T	T	P	1	
283441500	RAD04001	Metered-Dose Inhalant Drug	T	T	T	T	T	T	T	T	T	P	1	
283441500	RAD04002	Metered-Dose Inhalant Drug	T	T	T	T	T	T	T	T	T	P	1	
283441500	RAD04003	Metered-Dose Inhalant Drug	T	T	T	T	T	T	T	T	T	P	1	
283445000	OA90-1575	CBI82133	T	F	T	T	F	F	T	F	F	P	3	
283445000	OA90-42733	CBI967357	T	F	T	T	F	F	T	F	F	P	3	
283445000	OA90-42735	CBI166875	T	F	T	T	F	F	T	F	F	P	3	
283445000	OA90-42737	CBI180635	T	F	T	T	F	F	T	F	F	P	3	
283445000	OA90-42739	CBI608906	T	F	T	T	F	F	T	F	F	P	3	
283458300	OA90-21025	CBI767231	T	F	T	T	F	F	T	F	F	P	3	
283458300	OA90-21027	CBI838469	T	F	T	T	F	F	T	F	F	P	3	
283458300	OA90-21030	CBI129774	T	F	T	T	F	F	T	F	F	P	3	
283458300	OA90-21033	CBI876604	T	F	T	T	F	F	T	F	F	P	3	
283458300	OA90-21036	CBI660146	T	F	T	T	F	F	T	F	F	P	3	
283458300	OA90-21038	CBI669516	T	F	T	T	F	F	T	F	F	P	3	
283461100	OA90-13948	CBI844863	T	F	T	T	F	F	T	F	F	P	3	
283461100	OA90-13955	CBI858410	T	F	T	T	F	F	T	F	F	P	3	
283461100	OA90-13966	CBI807708	T	F	T	T	F	F	T	F	F	P	3	
283461100	OA90-35474	CBI67947	T	F	T	T	F	F	T	F	F	P	3	
283461100	OA90-43228	CBI952056	T	F	T	T	F	F	T	F	F	P	3	
283461800	OA90-4456	CBI529420	T	F	T	T	F	F	T	F	F	P	3	
283461800	OA90-4461	CBI555474	T	F	T	T	F	F	T	F	F	P	3	
283461800	OA90-4463	CBI713762	T	F	T	T	F	F	T	F	F	P	3	
283461800	OA90-8947	CBI610144	T	F	T	T	F	F	T	F	F	P	3	
283461900	OA90-2449	CBI156403	T	F	T	T	F	F	T	F	F	P	3	
283461900	OA90-2451	CBI70726	T	F	T	T	F	F	T	F	F	P	3	
283461900	OA90-2460	CBI536007	T	F	T	T	F	F	T	F	F	P	3	
283461900	OA90-34464	CBI994313	T	F	T	T	F	F	T	F	F	P	3	
283461900	OA90-4794	CBI451057	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-11512	CBI419520	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-13646	CBI30680	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-13651	CBI844439	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-13675	CBI947165	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-13928	CBI712939	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-1555	CBI936015	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-1569	CBI669454	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-26303	CBI210963	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-26306	CBI296855	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-26310	CBI469379	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-26313	CBI229137	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-26316	CBI635960	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-29217	CBI737671	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-34483	CBI612499	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-34485	CBI924207	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-35478	CBI976377	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-37439	CBI476508	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-37445	CBI21518	T	F	T	T	F	F	T	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
283463000	OA90-37448	CBI52581	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-42576	CBI714560	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-42638	CBI832805	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-42644	CBI582692	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-43370	CBI83989	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-4803	CBI667689	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-4805	CBI17733	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-8478	CBI392405	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-9915	CBI365596	T	F	T	T	F	F	T	F	F	P	3	
283463000	OA90-9917	CBI151370	T	F	T	T	F	F	T	F	F	P	3	
283463700	OA90-25017	CBI987991	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-37212	CBI357875	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-38787	CBI49443	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-41778	CBI974649	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-42518	CBI963978	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-42520	CBI778169	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-42522	CBI773689	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-42748	CBI798312	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-5851	CBI734660	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-6453	CBI132572	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-6455	CBI566327	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-6457	CBI659189	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-6459	CBI533151	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-6500	CBI572833	T	F	T	T	F	F	F	F	F	P	3	
283463700	OA90-6502	CBI590049	T	F	T	T	F	F	F	F	F	P	3	
283463900	OA90-42741	CBI139671	T	F	T	T	F	F	T	F	F	P	3	
283463900	OA90-42743	CBI395972	T	F	T	T	F	F	T	F	F	P	3	
283463900	OA90-8282	CBI185471	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-10864	CBI45698	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-11455	CBI939780	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-13657	CBI242604	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-13662	CBI615817	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-13934	CBI398497	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-13976	CBI667556	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-14809	CBI570705	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-17678	CBI31070	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-21217	CBI963271	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-22836	CBI912960	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-22839	CBI726498	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-22841	CBI879957	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-22865	CBI943652	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-22932	CBI248761	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-22954	CBI298279	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-22977	CBI327839	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-2365	CBI35780	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-2469	CBI728037	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-2471	CBI285727	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-25015	CBI387853	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-25404	CBI480600	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-25407	CBI744232	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-26335	CBI269465	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-29224	CBI627820	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-3066	CBI164428	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-3068	CBI635264	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-3076	CBI341376	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-31421	CBI483001	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-31423	CBI894710	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-31425	CBI297258	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-31427	CBI352533	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-31429	CBI196816	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-31431	CBI944593	T	F	T	T	F	F	T	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
283469800	OA90-31433	CBI461532	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-31435	CBI664317	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-32532	CBI43346	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-32632	CBI783140	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-32635	CBI701212	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-32720	CBI233789	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-34421	CBI747329	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-34440	CBI502707	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-34444	CBI477853	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-35470	CBI14404	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-36303	CBI913670	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-36306	CBI300789	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-36615	CBI432000	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-36625	CBI48142	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-37184	CBI283626	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-37463	CBI599279	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-37466	CBI922976	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-38789	CBI199016	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-39163	CBI911657	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-39165	CBI207726	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-41320	CBI772699	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-41322	CBI920063	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-41750	CBI174063	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-41754	CBI191700	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-41765	CBI902777	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-43231	CBI277649	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-43233	CBI13439	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-43235	CBI532431	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-43237	CBI931014	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-4765	CBI76897	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-4767	CBI984451	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-4779	CBI592505	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-4826	CBI926755	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-4832	CBI257135	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-4839	CBI946161	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-8110	CBI731	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-8514	CBI886640	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-8516	CBI246543	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-8772	CBI902645	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-8941	CBI82969	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-9417	CBI645040	T	F	T	T	F	F	T	F	F	P	3	
283469800	OA90-9423	CBI688000	T	F	T	T	F	F	T	F	F	P	3	
283484100	OA90-2218	CBI340053	T	F	T	T	F	F	T	F	F	P	3	
283484100	OA90-23411	CBI993511	T	F	T	T	F	F	T	F	F	P	3	
283484100	OA90-3072	CBI929948	T	F	T	T	F	F	T	F	F	P	3	
283484100	OA90-3074	CBI484134	T	F	T	T	F	F	T	F	F	P	3	
283484100	OA90-37175	CBI473	T	F	T	T	F	F	T	F	F	P	3	
283484100	OA90-37470	CBI850727	T	F	T	T	F	F	T	F	F	P	3	
283484100	OA90-41324	CBI278879	T	F	T	T	F	F	T	F	F	P	3	
283486500	OA90-13943	CBI204591	T	F	T	T	F	F	T	F	F	P	3	
283486500	OA90-13959	CBI746035	T	F	T	T	F	F	T	F	F	P	3	
283486500	OA90-34428	CBI641809	T	F	T	T	F	F	T	F	F	P	3	
283486500	OA90-34431	CBI875018	T	F	T	T	F	F	T	F	F	P	3	
283486500	OA90-34448	CBI301796	T	F	T	T	F	F	T	F	F	P	3	
283486500	OA90-34476	CBI538350	T	F	T	T	F	F	T	F	F	P	3	
283486500	OA90-38625	CBI190118	T	F	T	T	F	F	T	F	F	P	3	
283486500	OA90-42635	CBI820269	T	F	T	T	F	F	T	F	F	P	3	
283486500	OA90-8929	CBI27893	T	F	T	T	F	F	T	F	F	P	3	
283486500	OA90-9410	CBI612302	T	F	T	T	F	F	T	F	F	P	3	
283487100	OA90-13628	CBI532924	T	F	T	T	F	F	T	F	F	P	3	
283487100	OA90-14411	CBI776760	T	F	T	T	F	F	T	F	F	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
283487100	OA90-21227	CBI959782	T	F	T	T	F	F	T	F	F	P	3	
283487100	OA90-33274	CBI438798	T	F	T	T	F	F	T	F	F	P	3	
283490000	OA90-13746	CBI423137	F	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-16322	CBI470311	F	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-16325	CBI614177	F	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-17118	CBI490110	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-17129	CBI878668	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-18133	CBI402780	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-18139	CBI990709	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-18148	CBI457016	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-18150	CBI24586	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-18157	CBI797570	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-18166	CBI505730	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-18188	CBI896932	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-18214	CBI104032	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-22973	CBI378213	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-22988	CBI963864	F	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-22990	CBI544267	F	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-22992	CBI645193	F	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-22995	CBI173292	F	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23313	CBI559978	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23315	CBI759733	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23318	CBI993594	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23320	CBI203990	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23323	CBI233582	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23348	CBI607754	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23351	CBI651388	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23354	CBI45844	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23357	CBI859425	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23359	CBI722491	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23362	CBI271595	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23377	CBI882524	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23379	CBI374493	F	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-23385	CBI539724	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-2353	CBI85539	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-2360	CBI777481	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-2363	CBI270748	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-2929	CBI878715	F	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-33191	CBI699933	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-34424	CBI377962	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-34426	CBI445767	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-36619	CBI808083	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-36621	CBI84684	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-36623	CBI457015	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-3937	CBI202887	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-42655	CBI478020	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-43245	CBI176089	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-43503	CBI483613	F	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-43505	CBI962753	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-43511	CBI941356	F	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-557	CBI917237	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-7474	CBI917537	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-7500	CBI139869	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-8953	CBI258642	T	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-9955	CBI406842	F	F	F	F	F	F	F	F	F	P	3	
283490000	OA90-9960	CBI385088	F	F	F	F	F	F	F	F	F	P	3	
284112100	N0102034	institutional liquid machine dishwash	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0102050	industrial dishwash: regular duty	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0102051	industrial dishwash: pot and pan cleane	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0102052	industrial dishwash: alkal. pot and pan	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109001	rinse additives biodeg. mach. dishwash	F	T	T	T	F	F	T	T	F	P	2	6

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284112100	N0109002	rinse additives biodeg. mach. dishwash	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109003	rinse additives biodeg. mach. dishwash	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109004	rinse additives biodeg. mach. dishwash	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109005	rinse additives, machine dishwashing	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109006	rinse additives, machine dishwashing	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109007	rinse additives, machine dishwashing	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109008	rinse additives, machine dishwashing	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109009	rinse additives, machine dishwashing	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109010	rinse additives, machine dishwashing	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109011	rinse additives-machine dishwashing-aci	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109012	rinse additives-machine dishwashing-neu	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109013	rinse additives, machine dishwashing	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109014	rinse additives, machine dishwashing	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109015	rinse additives, machine dishwashing	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109016	rinse additives, machine dishwashing	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109017	rinse additives, machine dishwashing	F	T	T	T	F	F	T	T	F	P	2	6
284112100	N0109018	rinse additives, machine dishwashing	F	T	T	T	F	F	T	T	F	P	2	6
284112100	OA90-27365	CBI421643	F	T	T	T	F	F	T	T	F	P	2	6
284112100	OA90-2863	CBI218626	F	T	T	T	F	F	T	T	F	P	2	6
284112100	OA90-39076	CBI935241	F	T	T	T	F	F	T	T	F	P	2	6
284112500	N0105016	all purpose cleaner with fbr	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105018	all purp janitorial cleaning concentrat	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105025	all purpose liquid industrial cleaner	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105028	all purp.indust. cleaner-phosphated,mod	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105031	all purpose cleaner	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105040	all purpose cleaner with alkanolamides	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105043	food industry cleaner-general use liqui	F	T	T	T	F	F	T	T	F	P	2	3
284112500	N0105048	general purpose cleaner - industrial	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105053	general purpose cleaner - metal parts	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105058	heavy duty all purpose steam cleaner	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105059	industrial cleaner	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105060	light duty cleaner	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105063	liq. high pressure cleaner (concentrate	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105069	liquid cleaner	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0105070	liq.gen.purp.alkaline steam clean-hvydt	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0111021	hard surface cleaner	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0111043	hard surface spray cleaner	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0113002	all-surface steam cleaner	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0113007	bottle cleaner	F	F	T	T	F	F	T	T	F	P	2	3
284112500	N0113013	bottle wash compound	F	F	T	T	F	F	T	T	F	P	2	3
284112500	N0113014	bottle wash - machine a	F	F	T	T	F	F	T	T	F	P	2	3
284112500	N0113015	bottle wash - machine b	F	F	T	T	F	F	T	T	F	P	2	3
284112500	N0113017	butyl cleaner (heavy duty degreaser)	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0113018	butyl cleaner	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0113019	"butyl" cleaner	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0113020	butyl cleaner and degreaser	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0113068	glass/bottle liquid cleaner compound	F	T	T	T	F	T	T	T	F	P	2	3
284112500	N0113080	high pressure cleaner - liquid, clear	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0113081	high pressure cleaner - acid	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0113082	high pressure steam cleaner	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0113084	industrial cleaner - alkaline	F	T	T	T	T	T	T	T	F	P	2	3
284112500	N0116010	solvent emulsion cleaner	F	F	F	F	F	F	F	F	T	P	2	3
284112500	OA90-17432	CBI777074	F	T	T	T	T	T	T	T	F	P	2	3
284112500	OA90-17583	CBI648103	F	T	T	T	T	T	T	T	F	P	2	3
284112500	OA90-17983	CBI972464	F	F	F	F	F	F	F	F	F	P	2	3
284112500	OA90-19429	CBI676724	F	F	F	F	F	F	F	F	F	P	2	3
284112500	OA90-29347	CBI606263	F	F	F	F	F	F	F	F	F	P	2	3
284112500	OA90-39078	CBI607619	F	T	T	T	T	T	T	T	F	P	2	3
284112500	OA90-41001	CBI701246	F	T	T	T	T	T	T	T	F	P	2	3
284112500	OA90-4366	CBI61197	F	T	T	T	F	F	T	T	F	P	2	3
284112500	OA90-7529	CBI79294	F	T	T	T	T	T	T	T	F	P	2	3

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284112500	OA90-7628	CBI676716	F	T	T	T	T	T	T	T	F	P	2	3
284112600	N0105005	alkaline allpurp.indust.clnr-phosph.pwd	F	T	T	T	T	T	T	T	F	P	3	
284112600	N0105044	food industry cleaner-powder	F	T	T	T	F	F	T	T	F	P	3	
284112800	N0113004	asphalt release agents	F	F	F	F	F	F	F	F	F	P	2	4
284112800	N0113005	asphalt release agents	F	F	F	F	F	F	F	F	F	P	2	4
284112800	N0113025	cip cleaner	F	T	T	T	T	T	T	T	F	P	2	4
284112800	N0113026	cip cleaner	F	T	T	T	T	T	T	T	F	P	2	4
284114100	N0106058	laundry powders-comm-low temp-phos-caus	F	F	T	T	F	F	T	F	F	P	2	1
284114300	N0106023	heavy duty commercial laundry detergent	F	F	T	T	F	F	T	F	F	P	2	1
284114300	N0106024	industrial laundry detergent	F	F	T	T	F	F	T	F	F	P	2	1
284114300	N0106059	laund.powd.-comm-lowtemp-nonphos-noncau	F	F	T	T	F	F	T	F	F	P	2	1
284114300	N0106060	laund. powd.-comm-low temp-phos-noncaus	F	F	T	T	F	F	T	F	F	P	2	1
284114300	N0106096	laundry detergent powder	F	F	T	T	F	F	T	F	F	P	2	1
284114300	N0106097	laundry detergent powder (low foam) - a	F	F	T	T	F	F	T	F	F	P	2	1
284114300	N0106098	laundry detergent powder (low foam) - b	F	F	T	T	F	F	T	F	F	P	2	1
284114300	N0106099	laundry detergent powder - low phosphat	F	F	T	T	F	F	T	F	F	P	2	1
284114300	N0106100	laundry detergent powder - no phosphate	F	F	T	T	F	F	T	F	F	P	2	1
284114600	N0106092	laundry detergent,liquid-emulsion type	F	T	T	T	T	T	T	F	P	2	1	
284114600	N0106093	laundry detergent,liquid-slurry type	F	F	T	T	F	F	T	F	F	P	2	1
284114600	N0106094	laundry detergent,liquid	F	T	T	T	T	T	T	F	P	2	1	
284114600	N0106121	reg-built laund liq-high alkaline-phosp	F	F	T	T	F	F	T	F	F	P	2	1
284114600	N0106122	reg-built laund liq-high alkal-nonphosp	F	F	T	T	F	F	T	F	F	P	2	1
284114600	N0106123	reg-built laund liq-low alkaline-phosph	F	T	T	T	T	T	T	F	P	2	1	
284114600	N0106124	reg-built laund liq-low alkal-nonphosph	F	T	T	T	T	T	T	F	P	2	1	
284114600	N0113008	bilge cleaner - solvent emulsifier	F	F	F	F	F	F	F	F	F	P	2	1
284114600	N0113009	bilge cleaners	F	F	F	F	F	F	F	F	F	P	2	1
284114600	N0113010	bilge cleaners	F	F	F	F	F	F	F	F	F	P	2	1
284114600	N0113011	bilge cleaners	F	F	F	F	F	F	F	F	F	P	2	1
284114600	N0113012	bilge cleaners	F	F	F	F	F	F	F	F	F	P	2	1
284114900	N0106002	commercial laundry liquid	F	F	T	T	F	F	T	F	F	P	2	1
284114900	N0106036	industrial laundry detergent	F	F	T	T	F	F	T	F	F	P	2	1
284114900	N0106037	industrial laundry detergent	F	F	T	T	F	F	T	F	F	P	2	1
284114900	N0106038	industrial laundry detergent	F	F	T	T	F	F	T	F	F	P	2	1
284114900	N0106039	laund.detergent-commercial:high qual li	F	F	T	T	F	F	T	F	F	P	2	1
284114900	N0106042	laundry detergent-comm-unbuilt liq-prem	F	F	T	T	F	F	T	F	F	P	2	1
284114900	N0106043	laundry detergent-comm-unbuilt liq-prem	F	F	T	T	F	F	T	F	F	P	2	1
284114900	N0106095	laundry detergent liquid, heavy duty	F	F	T	T	F	F	T	F	F	P	2	1
284114900	N0113064	food processing equipment cleaner, spra	F	F	T	T	F	F	T	T	F	P	2	1
284114900	N0113085	liquid high pressure cleaner concentrat	F	F	T	T	F	F	T	T	F	P	2	1
284114900	N0113086	liquid high pressure concentrate	F	F	T	T	F	F	T	T	F	P	2	1
284116700	N0113027	coffee & tea machine cleaner-concentrat	F	T	T	T	F	F	T	T	F	P	2	3
284116700	N0113029	dairy milkstone remover	F	F	T	T	F	F	T	T	F	P	2	3
284116700	N0113087	liquid acid dairy sanitizer & cleaner	F	T	T	T	F	F	T	T	F	P	2	3
284117700	N0107001	metal cleaner,acid-alum.&stainless stee	F	T	T	T	T	T	T	F	P	3		
284117700	N0107002	metal cleaner, acid	F	T	T	T	T	T	T	F	P	3		
284117700	N0107003	metal cleaner, acid	F	T	T	T	T	T	T	F	P	3		
284117700	N0107004	metal cleaner - brightner for aluminium	F	T	T	T	T	T	T	F	P	3		
284117700	N0107005	metal cleaner - brightner for aluminium	F	T	T	T	T	T	T	F	P	3		
284117700	N0107006	metal cleaner - brightner for aluminium	F	T	T	T	T	T	T	F	P	3		
284117700	N0107007	metal cleaner-brightner (light dty) alu	F	T	T	T	T	T	T	F	P	3		
284117700	N0107008	metal cleaner - brightner for aluminium	F	T	T	T	T	T	T	F	P	3		
284117700	N0107009	metal cleaner, heavy duty	F	T	T	T	T	T	T	F	P	3		
284117700	N0107011	metal cleaner, heavy duty	F	T	T	T	T	T	T	F	P	3		
284117700	N0107014	metal cleaner, light duty	F	T	T	T	T	T	T	F	P	3		
284117700	N0107015	metal cleaner, light duty for oil rigs	F	F	F	F	F	F	F	F	P	3		
284117700	N0107016	metal cleaner, low-foam liquid-c	F	T	T	T	T	T	T	F	P	3		
284117700	N0107017	metal cleaner, low-foam liquid-a	F	T	T	T	T	T	T	F	P	3		
284117700	N0107018	metal cleaner, low-foam liquid-b	F	T	T	T	T	T	T	F	P	3	4	
284117700	N0107024	metal cleaner, solvent-emulsifier	F	T	T	T	T	T	T	F	P	3		
284117700	N0107028	aircraft cleaner	F	F	F	F	F	F	F	F	F	P	3	
284117700	N0107029	aircraft cleaner	F	F	F	F	F	F	F	F	F	P	3	

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284117700	N0107030	alkaline metal degreasing bath	F	F	F	F	F	F	F	F	F	P	3	
284117700	N0107031	alkali metal degreasing bath	F	F	F	F	F	F	F	F	F	P	3	
284117700	N0107032	alkaline soak tank cleaner for aluminum	F	T	T	T	F	F	T	F	F	P	3	
284117700	N0107033	alkaline soak tank cleaner for brass	F	T	T	T	T	F	F	T	F	P	3	
284117700	N0107042	aluminum cleaner (acidic)	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107043	aluminum cleaner i	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107044	aluminum cleaner ii	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107045	caustic-gluconate soak formulation	F	T	T	T	T	F	F	T	F	P	3	
284117700	N0107046	cold metal cleaner	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107047	cold metal cleaner	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107049	metal cleaner (soak cleaner) ferrous	F	T	T	T	T	F	F	T	F	P	3	
284117700	N0107050	metal cleaner (soak cleaner) non-ferrous	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107060	rust remover (dip part cleaners) i	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107061	rust remover (dip part cleaners) ii	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107063	silver cleaning bath	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107069	spray metal cleaner	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107070	spray metal cleaner	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107071	steam metal cleaner	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107072	steam metal cleaner	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107073	highqual metal de-oiling liq conc-hvyoi	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107074	highqual metal de-oiling liqconc-genpur	F	T	T	T	T	T	T	T	F	P	3	
284117700	N0107075	highqual metal de-oiling liq conc-lt oi	F	T	T	T	T	T	T	T	F	P	3	
284117800	N0107010	metal cleaner, heavy duty	F	T	T	T	T	T	T	T	F	P	3	4
284117800	N0107012	metal cleaner, heavy duty low-foam	F	T	T	T	T	T	T	T	F	P	3	4
284117800	N0107013	metal cleaner,hvy dty low-foam, low tem	F	T	T	T	T	T	T	T	F	P	3	4
284117800	N0107019	metal cleaner, medium duty	F	T	T	T	T	T	T	T	F	P	3	4
284117800	N0107020	metal cleaner, soak tank-a	F	T	T	T	F	F	T	T	F	P	3	4
284117800	N0107021	metal cleaner, soak tank-b	F	T	T	T	F	F	T	T	F	P	3	4
284117800	N0107059	soak tank metal cleaner-pwdr-aluminum	F	T	T	T	F	F	T	T	F	P	3	4
284117800	N0107064	soak tank metal cleaner	F	T	T	T	F	F	T	T	F	P	3	4
284117800	N0107065	soak tank metal cleaner-pwdr for brass	F	T	T	T	F	F	T	T	F	P	3	4
284117800	N0107066	soak tank metal cleaner-pwdr for zinc	F	T	T	T	F	F	T	T	F	P	3	4
284117800	N0107067	soak tank metal cleaner-pwdr for magnes	F	T	T	T	F	F	T	T	F	P	3	4
284117800	N0107068	soak tank metal cleaner-pwdr for copper	F	T	T	T	F	F	T	T	F	P	3	4
284117800	N0113030	dairy pipeline cleaner - low foam	F	F	F	F	F	F	F	F	F	P	2	4
284117800	N0113031	dairy line cleaner	F	F	F	F	F	F	F	F	F	P	2	4
284117800	N0113032	dairy line cleaner	F	F	F	F	F	F	F	F	F	P	2	4
284117800	N0113033	dairy pipeline cleaner	F	F	F	F	F	F	F	F	F	P	2	4
284117800	N0113034	dairy farm acid liquid	F	F	F	F	F	F	F	F	F	P	2	4
284117800	N0113035	dairy cleaner - alkaline powder	F	F	T	T	F	F	T	T	F	P	2	4
284117900	N0113028	concrete cleaner	T	T	T	T	T	T	T	T	F	P	3	
284117900	N0113073	heavy duty concrete cleaner	T	T	T	T	T	T	T	T	F	P	3	
284120100	N0102033	concentrated liquid machine dishwash	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0102035	medium duty liquid machine spray wash	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0102038	mechanical dishwashing detergent	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0102041	dishwashing detergent, machine	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0102042	dishwashing detergent, machine	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0102045	dishwashing detergent, machine	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0102048	dishwashing detergent, machine	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0102053	liquid machine dishwashing concentrate	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0102056	machine dishwashing formulation	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109019	rinse aid concentrates	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109020	rinse aid concentrates	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109021	dishwasher rinse aid	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109022	dishwasher rinse aid	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109023	dishwasher rinse aid	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109024	rinse aid - economical type	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109025	rinse aid - low density type	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109026	rinse aid - high density type	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109027	dishwasher rinse aids	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109028	dishwasher rinse aids	T	T	T	T	F	F	T	T	F	P	2	6



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120100	N0109090	rinse aids - hard water formulations	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109091	rinse aids - hard water formulations	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109092	rinse aids - hard water formulations	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109093	rinse aids - hard water formulations	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109094	rinse aids - hard water formulations	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109095	rinse aids - hard water formulations	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0109096	rinse aids - hard water formulations	T	T	T	T	F	F	T	T	F	P	2	6
284120100	N0113003	alkaline cleaner	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-11242	CBI945509	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-13046	CBI225661	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-15543	CBI918390	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-15567	CBI29336	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-21834	CBI299648	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-23654	CBI159606	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-23781	CBI309617	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-23987	CBI972342	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-24767	CBI780275	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-25446	CBI811848	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-28798	CBI878553	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-28824	CBI29190	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-28831	CBI54124	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-29848	CBI810191	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-29887	CBI217663	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-30988	CBI962133	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-36288	CBI163667	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-3806	CBI814956	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-38876	CBI202248	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-38919	CBI918420	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-38921	CBI484396	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-38949	CBI375080	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-660	CBI395668	T	T	T	T	F	F	T	T	F	P	2	6
284120100	OA90-9962	CBI147903	T	T	T	T	F	F	T	T	F	P	2	6
284120300	N0102036	automatic dishwashing detergent (powder	T	T	T	T	F	F	T	T	F	P	2	6
284120300	N0102037	mechanical dishwashing detergent	T	T	T	T	F	F	T	T	F	P	2	6
284120300	N0102039	mechanical dishwashing detergent	T	T	T	T	F	F	T	T	F	P	2	6
284120300	N0102040	dishwashing detergent, machine	T	T	T	T	F	F	T	T	F	P	2	6
284120300	N0102043	dishwashing detergent, machine-a	T	T	T	T	F	F	T	T	F	P	2	6
284120300	N0102044	dishwashing detergent, machine-b	T	T	T	T	F	F	T	T	F	P	2	6
284120300	N0102046	dishwashing detergent, machine	T	T	T	T	F	F	T	T	F	P	2	6
284120300	N0102047	machine dishwashing detergent	T	T	T	T	F	F	T	T	F	P	2	6
284120300	N0102049	dishwashing detergent, machine	T	T	T	T	F	F	T	T	F	P	2	6
284120300	N0102054	machine dishwashing detergent	T	T	T	T	F	F	T	T	F	P	2	6
284120300	N0102055	automatic dishwasher detergent	T	T	T	T	F	F	T	T	F	P	2	6
284120300	N0102057	machine dishwashing powder	T	T	T	T	F	F	T	T	F	P	2	6
284120400	N0101002	tile cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0101003	tile cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0101004	tile cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0101005	tile cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0102001	dishwash liquid - premium quality	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102002	dishwash liquid - good quality	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102003	dishwash liquid - economy	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102004	dishwash liquid - generic	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102005	dishwash liquid - premium quality	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102006	dishwash liquid - good quality	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102007	dishwash liquid - economy	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102008	dishwash liquid - generic	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102009	hand dishwash liquid-high quality	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102010	hand dishwash liquid-good quality	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102011	hand dishwash liquid-economy	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102012	liquid dishwash	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102015	light duty liquid dishwash 1	T	T	T	T	F	F	T	T	F	P	2	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	N0102016	light duty liquid dishwash 2	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102017	light duty liquid hand dishwash	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102018	liquid dishwashing compound	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102019	liquid dishwashing detergent	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102020	liquid dishwashing detergent	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102021	liquid dishwashing detergent	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102022	liquid dishwashing detergent	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102023	liquid dishwashing detergent (premium)	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102024	liquid dishwashing detergent (medium)	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102025	liquid dishwashing detergent (manual)	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102026	hand dishwashing detergent	T	T	T	T	F	F	T	T	F	P	2	6
284120400	N0102029	dishwashing detergent liquid, hand	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0102030	dishwashing detergent liquid, hand	T	T	T	T	F	F	T	T	F	P	2	3
284120400	N0105006	all-surface household cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105007	all purpose cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105008	all purpose cleaner type (ajax)	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105009	all purpose cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105010	all purp cleaner - transparent, liquid	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105011	all purpose cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105012	all purpose cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105013	all purpose cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105014	all purpose cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105017	all purpose wall/tile/floor cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105019	all purpose concentrate cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105020	all purpose concentrate cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105021	all purpose concentrate cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105022	all purp.clean(liq conc)clear,heavy-dut	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105023	all purpose liq. conc. cleaner-a	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105024	all purpose heavy duty cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105026	all purpose liquid detergent-a	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105027	all purpose household detergent	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105029	all purpose light duty liquid detergent	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105030	all purpose cleaner, light duty	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105032	all purpose liquid concentrate cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105033	all purpose cleaner, liquid	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105034	all purpose cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105035	all-purpose liquid detergent	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105036	all-purpose liquid detergent	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105037	all-purpose liquid detergent	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105038	all-purpose liquid pine oil detergent	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105041	caustic cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105046	general cleaner - household	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105047	general purpose cleaner - household	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105049	general purpose cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105054	heavy duty alkaline cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105055	heavy duty cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105057	heavy duty cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105061	lt. duty,all purp. wall/tile/flr cleane	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105062	liquid concentrate	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105064	limonene based allpurp. clean-clear liq	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105065	limonene based hvydty cleaner/degreaser	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105066	limonene based household cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105067	limonene based house. & indust. cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105068	d-limonene spray cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105071	multi-purp. cleaner/stripper/degreaser	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105072	multi-purp. cleaner base on limonene	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0105073	general purpose cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111006	hard surface cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111007	hard surface cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111010	hard surface cleaner - all purpose spra	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111011	hard surface cleaner - liquid conc.	T	T	T	T	T	T	T	T	F	P	3	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	N0111012	hard surface cleaner-liquid disinfectan	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111014	hard surface cleaner - liq - bathroom	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111015	hard surface cleaner - bathroom - acid	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111016	hard surface cleaner - degreasing type	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111017	hard surface cleaner - all purpose type	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111018	hard surface cleaner - all purpose type	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111019	hard surface cleaner - all purpose type	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111020	hard surface cleaner - all purpose type	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111022	hard surface cleaner - gen purpose type	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111023	hard surface cleaner - heavy duty type	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111024	hard surface cleaner - pine oil - econ	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111025	hard surface cleaner - solvent type	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111026	hard surface cleaner - all purp liq con	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111027	hard surface cleaner - all purpose spra	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111028	hardsurfcl-nonphos-prem-liqconc-hard h2	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111029	hrdsurfcl-nonphos-prem-liqcon med-hd h2	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111030	hardsurfclnr-nonphos-prem-liqcon-hvy oi	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111031	hard surf clnr-liq conc-high qual-phos	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111032	hardsurfclnr-allpurp-liqcon-high-nonpho	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111033	hardsurfclnr-allpurp-liqcon-reg-w/phos	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111034	hardsurfclnr-allpurp-liqcon-reg-nonphos	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111035	hard surface cleaner-all purp-econ-phos	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111036	hard surface clnr-allpurp-econ-nonphos	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111037	hard surf clnr-allpurp-pine oil-highqua	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111038	hard surf clnr-allpurp-pine oil-goodqua	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111039	hard surf clnr-allpurp-ready to use liq	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111040	spray and wipe liquid	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111041	hard surf sanitizer & clnr disinfectnt	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111042	hardsurfclnr/fabric pretreat-greaseremo	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111044	hard surface & floor cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111045	hard surface & floor cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111046	liquid hard surf clnr-highsuds-unbuilt	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111047	liq hard surf clnr-dilutable-phosphbuil	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111048	liquid hard surface cleaner concentrate	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0111049	liquid hard surface cleaner concentrate	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0113006	barbecue cleaner - high alkaline	T	F	F	F	F	F	F	T	F	P	3	3
284120400	N0113069	grill cleaner	T	F	F	F	F	F	F	T	F	P	3	3
284120400	N0113070	heavy duty cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0113074	heavy duty household cleaner - 4d	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0113075	heavy duty household cleaner - 5d	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0113076	heavy duty liquid steam cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0113078	high alkaline cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0113079	high alkaline cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0113083	hot plate/grill cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0113089	liquid caustic cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0113090	low foam spray washing compound	T	T	T	T	T	T	T	T	F	P	3	3
284120400	N0113109	synthetic cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10093	CBI565528	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10097	CBI357417	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10133	CBI499196	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10141	CBI702384	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10145	CBI98807	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10299	CBI703535	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10317	CBI124668	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10363	CBI757716	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10371	CBI171446	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10374	CBI724243	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10378	CBI141655	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10386	CBI39776	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10407	CBI694367	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10420	CBI920099	T	T	T	T	T	T	T	T	F	P	3	3



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	OA90-10429	CBI47693	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10436	CBI321619	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10439	CBI789628	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10464	CBI657866	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10466	CBI582567	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10474	CBI351601	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10647	CBI32941	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10650	CBI244672	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10740	CBI555015	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10805	CBI833011	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-10842	CBI861911	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11148	CBI123350	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11178	CBI830742	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11192	CBI901264	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11196	CBI434950	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11202	CBI182947	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11223	CBI631861	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11225	CBI79053	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11263	CBI828626	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11334	CBI289290	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11337	CBI388583	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11350	CBI671126	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11353	CBI445106	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11358	CBI126787	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11394	CBI799779	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11441	CBI671037	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11445	CBI801962	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11499	CBI966325	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11502	CBI24837.	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11504	CBI875216	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11507	CBI430830	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11510	CBI685224	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11850	CBI6394	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11858	CBI977257	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11860	CBI380419	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11864	CBI964508	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11866	CBI603697	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11876	CBI177713	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-11878	CBI167334	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12109	CBI452609	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12111	CBI737624	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12124	CBI368440	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12131	CBI912701	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12178	CBI703581	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12245	CBI52819	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12249	CBI796693	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12270	CBI817439	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12843	CBI174316	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12855	CBI4075	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12860	CBI77057	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12864	CBI416771	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12868	CBI523126	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-12880	CBI565693	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-13048	CBI957882	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-13062	CBI330061	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14052	CBI199962	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14057	CBI108377	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14365	CBI59849	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14369	CBI739151	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14379	CBI904134	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14384	CBI203834	T	T	T	T	T	T	T	T	F	P	3	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	OA90-14387	CBI981043	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14443	CBI981546	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14454	CBI446950	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14457	CBI510755	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14473	CBI909389	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14487	CBI758733	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14561	CBI257511	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14578	CBI874559	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14593	CBI60807	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14596	CBI464403	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14604	CBI959909	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14608	CBI481780	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14615	CBI107239	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14621	CBI188591	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14628	CBI605838	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-14631	CBI277695	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-15049	CBI602824	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-15053	CBI973372	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-15060	CBI762053	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-15064	CBI527917	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-15262	CBI730441	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-15528	CBI439270	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-15559	CBI290312	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-15563	CBI173735	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-15693	CBI662907	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-16156	CBI308917	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-16159	CBI325957	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-16311	CBI552397	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-16372	CBI282954	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17027	CBI365596	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17050	CBI486008	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17106	CBI886680	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17108	CBI641175	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17428	CBI766686	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17434	CBI366953	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17442	CBI492385	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17563	CBI385374	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17569	CBI970942	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17578	CBI599773	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17587	CBI673931	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17606	CBI647033	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17711	CBI738230	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17744	CBI748442	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17811	CBI58049	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17843	CBI933912	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17848	CBI292288	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17935	CBI592378	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17939	CBI352654	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17943	CBI701919	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17946	CBI238040	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17963	CBI462682	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17965	CBI969768	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17974	CBI152512	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17989	CBI820347	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-17995	CBI642743	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18006	CBI32089	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18009	CBI805968	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18015	CBI945426	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18041	CBI287446	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18060	CBI330539	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18066	CBI727329	T	T	T	T	T	T	T	T	F	P	3	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	OA90-18078	CBI143476	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18081	CBI417056	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18089	CBI613890	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18117	CBI578953	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18128	CBI69040	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18218	CBI334768	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18463	CBI112377	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18469	CBI491499	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18487	CBI889833	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18496	CBI548013	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18499	CBI74032	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18519	CBI706546	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18770	CBI166305	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18772	CBI225052	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18820	CBI852685	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18841	CBI555596	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18846	CBI776024	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-18849	CBI3694	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-1886	CBI599500	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19119	CBI219722	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19193	CBI269483	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19216	CBI76168	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19293	CBI98414	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19304	CBI47740	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19323	CBI649347	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19369	CBI286327	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19373	CBI34167	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19380	CBI221998	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19389	CBI311256	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19397	CBI427175	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19399	CBI408683	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19409	CBI91792	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19460	CBI604756	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19504	CBI423523	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19792	CBI815386	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-19976	CBI912221	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-20033	CBI211802	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-20083	CBI267391	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-20106	CBI477448	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-20117	CBI290718	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-20239	CBI825165	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-20241	CBI714645	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-20367	CBI171768	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-20717	CBI134129	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-20725	CBI412362	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21054	CBI359275	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21056	CBI389307	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21058	CBI623026	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21068	CBI869101	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21095	CBI346548	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21101	CBI388291	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21139	CBI616458	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21180	CBI589583	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21531	CBI940143	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21634	CBI335112	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21654	CBI281458	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21661	CBI134855	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21663	CBI856667	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21677	CBI878831	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21701	CBI279974	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21703	CBI537197	T	T	T	T	T	T	T	T	F	P	3	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	OA90-21812	CBI426679	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21819	CBI74719	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21842	CBI88845	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-21848	CBI825075	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-22132	CBI955177	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-22244	CBI941687	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-22334	CBI274522	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-22899	CBI362941	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-22902	CBI545131	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-22905	CBI974630	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-22980	CBI671489	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23050	CBI827092	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23067	CBI433392	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23072	CBI576514	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23084	CBI300943	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23103	CBI543260	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23106	CBI595904	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23132	CBI285290	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23134	CBI336248	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23146	CBI558690	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23148	CBI600337	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23151	CBI965968	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23153	CBI475214	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23155	CBI832089	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23162	CBI19709	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23243	CBI208292	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23255	CBI61356	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23262	CBI36005	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23279	CBI542396	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23477	CBI623315	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23605	CBI940037	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23611	CBI116415	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23621	CBI744650	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23627	CBI339785	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23635	CBI22816	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23644	CBI859732	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23678	CBI238306	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23694	CBI435108	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23697	CBI184868	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23721	CBI349392	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23744	CBI555308	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23768	CBI4912	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23801	CBI265852	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-23804	CBI890632	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24181	CBI50183	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24385	CBI270295	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24423	CBI793620	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24538	CBI726257	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24701	CBI203458	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24727	CBI979508	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24747	CBI232699	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24755	CBI156573	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24797	CBI424437	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24801	CBI524810	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24831	CBI993131	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24833	CBI374781	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24843	CBI558460	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24860	CBI699781	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24863	CBI649737	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24881	CBI478666	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-24883	CBI730630	T	T	T	T	T	T	T	T	F	P	3	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	OA90-24898	CBI883090	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-2517	CBI192692	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25231	CBI857968	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25242	CBI498823	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25453	CBI339028	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25457	CBI979993	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25469	CBI880498	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25553	CBI352543	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25561	CBI592799	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25622	CBI516928	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25648	CBI577177	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25651	CBI116667	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25654	CBI141150	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25671	CBI349450	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25676	CBI294641	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25679	CBI658880	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-25752	CBI447256	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27454	CBI573502	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27462	CBI628148	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27463	CBI807872	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27464	CBI738071	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27471	CBI881936	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27472	CBI334563	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27473	CBI842180	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27474	CBI197737	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27533	CBI421573	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27534	CBI872458	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27535	CBI109282	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27536	CBI135986	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27542	CBI979638	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27545	CBI676208	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27548	CBI38267	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27551	CBI607282	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27553	CBI460243	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27571	CBI743549	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27580	CBI286717	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27584	CBI166165	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27588	CBI281055	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27593	CBI634348	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27597	CBI7441	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-27616	CBI908204	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-2791	CBI460412	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-2807	CBI179336	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28620	CBI261663	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28630	CBI875266	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28780	CBI818233	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28783	CBI304460	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28837	CBI296586	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28840	CBI851467	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28847	CBI411714	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28852	CBI773354	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28855	CBI586495	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28863	CBI887757	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28878	CBI446126	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28897	CBI159824	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28908	CBI995748	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28932	CBI190588	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28946	CBI135135	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28973	CBI914046	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28989	CBI458731	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-28995	CBI554371	T	T	T	T	T	T	T	T	F	P	3	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	OA90-2907	CBI253462	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29087	CBI666806	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-2915	CBI592556	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29198	CBI787202	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-2923	CBI318048	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29231	CBI159493	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29355	CBI974452	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29367	CBI684714	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29376	CBI928830	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29499	CBI560963	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29501	CBI503094	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29508	CBI98459	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29522	CBI810253	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29525	CBI138020	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29544	CBI100653	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29575	CBI324083	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29602	CBI193528	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29671	CBI559842	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29675	CBI575317	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29751	CBI178003	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29772	CBI889288	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29780	CBI912644	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29786	CBI27661	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29788	CBI695842	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29790	CBI49750	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29793	CBI691478	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29797	CBI656218	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29805	CBI215049	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29807	CBI740328	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29812	CBI940915	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29814	CBI253156	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29816	CBI383043	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29823	CBI246930	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29825	CBI461974	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29829	CBI558505	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29831	CBI45962	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29833	CBI966472	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29836	CBI250554	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29839	CBI148801	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29841	CBI664651	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29844	CBI454379	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29854	CBI896833	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29862	CBI831211	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29866	CBI208183	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29876	CBI768382	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29879	CBI965295	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29883	CBI481824	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29894	CBI982713	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29939	CBI525984	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-29966	CBI423898	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-30067	CBI337815	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-30118	CBI913449	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-30121	CBI413876	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-30161	CBI12749	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3043	CBI438876	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3045	CBI162799	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3049	CBI169120	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-30899	CBI291138	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-30921	CBI539184	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-30943	CBI650013	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-30953	CBI125218	T	T	T	T	T	T	T	T	F	P	3	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	OA90-30974	CBI794334	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-30997	CBI569760	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31084	CBI623745	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31618	CBI238743	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31683	CBI141561	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31702	CBI635078	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3171	CBI47405	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31757	CBI540404	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31765	CBI398734	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3180	CBI516974	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31843	CBI302196	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31867	CBI806627	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31940	CBI793354	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31942	CBI605618	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31971	CBI741228	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31974	CBI572848	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31976	CBI874934	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-31979	CBI270120	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3213	CBI683837	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32183	CBI430000	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32200	CBI908996	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32206	CBI372469	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3222	CBI721105	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32234	CBI575908	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3231	CBI20176	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3233	CBI718326	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32406	CBI794843	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32408	CBI852546	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32410	CBI784119	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32414	CBI320003	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3252	CBI121645	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32655	CBI74307	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3272	CBI607964	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32774	CBI928572	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32784	CBI228314	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32787	CBI409694	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32792	CBI280999	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32800	CBI580351	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32803	CBI126392	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32806	CBI877979	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32809	CBI88717	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32812	CBI758370	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32828	CBI120564	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32918	CBI85728	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32923	CBI320495	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32971	CBI666917	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32979	CBI986272	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32981	CBI91101	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32983	CBI200749	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32986	CBI842315	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-32990	CBI438056	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33016	CBI289826	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33023	CBI50444	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33025	CBI532378	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33029	CBI458017	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33043	CBI472973	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33063	CBI804957	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33461	CBI516641	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33495	CBI519991	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33498	CBI617547	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33561	CBI845309	T	T	T	T	T	T	T	T	F	P	3	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	OA90-33563	CBI765787	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33917	CBI367378	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33920	CBI411297	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33951	CBI494677	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33967	CBI850477	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33974	CBI246370	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33979	CBI125659	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-33994	CBI970081	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-34004	CBI545950	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-34015	CBI75603	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-34071	CBI846023	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-34787	CBI994466	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-35458	CBI436737	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-35537	CBI240449	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-35560	CBI656445	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-35562	CBI343930	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-35575	CBI870777	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-35584	CBI583807	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36006	CBI609851	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36010	CBI908261	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36154	CBI564368	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36283	CBI363976	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36533	CBI17973	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36536	CBI831721	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36539	CBI798336	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36577	CBI333102	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36744	CBI676376	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36746	CBI205983	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36748	CBI235306	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36750	CBI842052	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-36765	CBI485914	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37380	CBI66126	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37382	CBI459541	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37385	CBI673792	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37388	CBI197936	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37391	CBI502470	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37394	CBI788705	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37397	CBI308514	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37437	CBI813058	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37493	CBI966634	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37534	CBI903655	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37575	CBI148826	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37746	CBI872561	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37973	CBI932593	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-37985	CBI950611	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38009	CBI914608	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38021	CBI478875	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38023	CBI193809	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38030	CBI142954	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38073	CBI363343	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3812	CBI352252	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38204	CBI203060	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38206	CBI6763	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38214	CBI65887	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38217	CBI938785	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38220	CBI274206	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38224	CBI388629	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38262	CBI184976	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38273	CBI144056	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38277	CBI658787	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38280	CBI975223	T	T	T	T	T	T	T	T	F	P	3	3



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	OA90-38284	CBI772007	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38303	CBI226286	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38308	CBI758003	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38328	CBI235874	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38340	CBI729193	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38471	CBI146105	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38615	CBI198787	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38644	CBI316935	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38673	CBI23173.	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38721	CBI747914	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38741	CBI708986	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38801	CBI2464	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38803	CBI766136	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38805	CBI309141	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38807	CBI446727	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38809	CBI997684	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38813	CBI695644	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38855	CBI159843	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38857	CBI633346	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38940	CBI912506	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38984	CBI84598	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-38990	CBI955786	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39227	CBI308190	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39289	CBI896656	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39293	CBI923884	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39306	CBI731780	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39312	CBI748059	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39338	CBI882178	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39341	CBI153478	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39345	CBI343023	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39390	CBI624518	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39399	CBI281653	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39437	CBI657976	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39440	CBI458359	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39445	CBI559292	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39447	CBI228138	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-39458	CBI602681	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3975	CBI154358	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-3977	CBI539598	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-40993	CBI295401	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-41034	CBI479557	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-41062	CBI509701	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-41172	CBI521030	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-41194	CBI670901	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-41208	CBI89648	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4131	CBI450831	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-41328	CBI154325	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4133	CBI68221	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-41332	CBI379656	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-41550	CBI732695	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-41776	CBI354787	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-41952	CBI922355	T	F	F	F	F	F	F	F	F	P	3	3
284120400	OA90-42142	CBI137359	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-42204	CBI860655	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-42216	CBI88391.	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-42219	CBI980063	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-42228	CBI161726	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-42235	CBI53609	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4224	CBI76247	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4227	CBI450896	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4244	CBI780170	T	T	T	T	T	T	T	T	F	P	3	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	OA90-42763	CBI495617	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-42855	CBI712262	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-42862	CBI467957	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43101	CBI395866	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43109	CBI771734	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43118	CBI414751	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43126	CBI567189	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43145	CBI476758	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43151	CBI214733	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43160	CBI500717	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43162	CBI785453	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43166	CBI141603	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43175	CBI430875	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43177	CBI399013	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43281	CBI786860	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43296	CBI753098	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43318	CBI306545	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4339	CBI795363	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4348	CBI925835	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4350	CBI234396	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4353	CBI352020	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4355	CBI883354	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4360	CBI633292	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43800	CBI913370	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-43900	CBI37014	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4396	CBI470802	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-443	CBI685638	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-451	CBI672424	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-468	CBI131127	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4729	CBI395387	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4731	CBI104614	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4735	CBI300523	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4737	CBI61821	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4750	CBI111106	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4761	CBI40796	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4844	CBI632781	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4847	CBI420474	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4855	CBI504869	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4876	CBI238725	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4888	CBI836231	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4891	CBI717095	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4894	CBI28920	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-4897	CBI210527	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5351	CBI140340	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5356	CBI234237	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5361	CBI112542	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5366	CBI269002	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5371	CBI405140	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5377	CBI446951	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5385	CBI791607	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5392	CBI422423	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5399	CBI335564	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5402	CBI511661	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5406	CBI427895	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5408	CBI201865	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5418	CBI616062	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5423	CBI109463	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5432	CBI289243	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5435	CBI43213	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5440	CBI60586	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5442	CBI582390	T	T	T	T	T	T	T	T	F	P	3	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	OA90-5448	CBI505907	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5556	CBI344905	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5591	CBI769769	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5598	CBI343662	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5604	CBI912052	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-566	CBI798393	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-5807	CBI734971	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-592	CBI893283	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-617	CBI987030	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6211	CBI432256	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6213	CBI687756	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-633	CBI538556	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-656	CBI66393	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6679	CBI841225	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-674	CBI178984	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6756	CBI597386	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6780	CBI637656	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6783	CBI796598	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6789	CBI227677	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6792	CBI307128	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6794	CBI966348	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6796	CBI237472	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6810	CBI986551	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6813	CBI947365	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-682	CBI16478	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-688	CBI718705	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-6960	CBI320803	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7039	CBI357756	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-705	CBI653870	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7058	CBI418115	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-707	CBI454393	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7081	CBI504809	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7085	CBI958933	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7096	CBI20513	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-710	CBI894331	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7110	CBI823439	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7131	CBI718497	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7172	CBI556763	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7254	CBI207911	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-726	CBI342600	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-728	CBI295358	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7285	CBI920521	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7298	CBI48751	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7309	CBI399175	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-743	CBI246040	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7431	CBI731975	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-746	CBI13726.	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7557	CBI201041	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7559	CBI787286	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7578	CBI654612	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7580	CBI443331	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7591	CBI545420	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7600	CBI439481	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7616	CBI306387	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7622	CBI500614	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7632	CBI757423	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7659	CBI661956	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7670	CBI874922	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7673	CBI441764	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7676	CBI7015	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7704	CBI803100	T	T	T	T	T	T	T	T	F	P	3	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120400	OA90-7721	CBI85488	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7724	CBI100245	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7743	CBI113446	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7771	CBI982189	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7773	CBI885277	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7775	CBI508460	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7779	CBI733375	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7781	CBI702040	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-7783	CBI928280	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8331	CBI610210	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8335	CBI739687	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8337	CBI410948	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8339	CBI565	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8341	CBI377549	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8345	CBI641691	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8347	CBI985365	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8349	CBI333173	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8351	CBI897746	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8353	CBI60280	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8358	CBI122943	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8360	CBI144378	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8362	CBI184028	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8364	CBI333763	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-839	CBI479654	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-8399	CBI867537	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-842	CBI558822	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-9086	CBI271864	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-945	CBI486751	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-9884	CBI888640	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-9889	CBI790409	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-9891	CBI154292	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-9899	CBI198268	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-9920	CBI3275	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-9922	CBI532570	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-9927	CBI554017	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-9938	CBI779354	T	T	T	T	T	T	T	T	F	P	3	3
284120400	OA90-9957	CBI899692	T	T	T	T	T	T	T	T	F	P	3	3
284120400	RAD02601	Hard Surface Cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120400	RAD02602	Hard Surface Cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120500	N0105015	all purpose cleaner (aerosol)	T	T	T	T	T	T	T	T	F	P	3	3
284120500	N0105039	all-purpose spray cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120500	N0105050	general purpose spray and wipe cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120500	N0105051	general purpose spray and wipe cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120500	N0105052	general purpose spray and wipe cleaner	T	T	T	T	T	T	T	T	F	P	3	3
284120500	N0105056	hvydytj.gdqual.allpurpspray-wall/tile/fl	T	T	T	T	T	T	T	T	F	P	3	3
284120500	OA90-10282	CBI146878	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-10296	CBI100726	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-1102	CBI535046	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-1109	CBI477286	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-11316	CBI153797	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-11331	CBI519287	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-11472	CBI362516	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-1159	CBI737918	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-12295	CBI631314	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-13363	CBI219203	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-13368	CBI435029	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-13717	CBI498937	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-14450	CBI474657	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-14618	CBI791912	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-15652	CBI178810	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-15662	CBI624164	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120500	OA90-17488	CBI714969	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-17514	CBI649867	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-17517	CBI914715	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-17551	CBI421604	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-19530	CBI525303	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-19534	CBI575534	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-19542	CBI878129	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-19545	CBI333862	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-22004	CBI327429	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-22010	CBI542653	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-23973	CBI540923	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-24193	CBI617045	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-24553	CBI961058	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-24690	CBI648350	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-24783	CBI862061	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-24828	CBI750430	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-24983	CBI750608	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-2520	CBI453134	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-25222	CBI40011	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-25229	CBI590275	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-27432	CBI478456	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-27529	CBI389538	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-27537	CBI906909	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-27574	CBI926147	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-28014	CBI816920	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-28015	CBI134268	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-28478	CBI621020	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-28531	CBI585919	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-30058	CBI579405	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-30158	CBI749418	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-30223	CBI129436	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-31006	CBI157933	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-31547	CBI313182	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-31557	CBI591316	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-31561	CBI513643	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-31788	CBI289389	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-31791	CBI679056	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-31833	CBI821558	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-3218	CBI941897	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-32422	CBI284592	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-32670	CBI419245	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-32780	CBI380760	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-33585	CBI221727	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-34233	CBI308592	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-34236	CBI879457	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-35279	CBI628372	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-35456	CBI424463	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-35864	CBI823692	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-35867	CBI650422	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-35874	CBI636301	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-35926	CBI931679	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-36569	CBI979335	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-38474	CBI790003	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-38604	CBI372021	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-38647	CBI165970	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-38725	CBI896339	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-38963	CBI975140	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-39537	CBI408833	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-3973	CBI524546	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-42000	CBI199638	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-4263	CBI814045	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284120500	OA90-4281	CBI586098	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-42929	CBI533989	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-43113	CBI501369	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-457	CBI327106	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-463	CBI976220	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-4849	CBI971606	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-488	CBI302785	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-6676	CBI279300	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-6682	CBI961130	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-6749	CBI694737	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-6816	CBI937371	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-7071	CBI994048	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-7102	CBI304246	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-7404	CBI69594	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-7422	CBI36276	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-7785	CBI673956	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-7853	CBI188968	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-7892	CBI697715	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-8265	CBI148951	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-8285	CBI90432	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-8453	CBI440601	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-8463	CBI366164	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-8536	CBI354928	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-8576	CBI935679	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-8631	CBI81377	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-871	CBI969786	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-9115	CBI64645	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-9489	CBI758673	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-9572	CBI128252	T	T	T	T	T	T	T	T	F	P	3	
284120500	OA90-973	CBI820661	T	T	T	T	T	T	T	T	F	P	3	
284120600	N0105042	chlorine cleaner-kitchen,bathroom-powde	T	T	T	T	T	T	T	T	F	P	3	
284120600	N0113071	heavy duty cleaner - dry	T	T	T	T	T	T	T	T	F	P	3	
284120600	OA90-11403	CBI127770	T	T	T	T	T	T	T	T	F	P	3	
284120600	OA90-11462	CBI900276	T	T	T	T	T	T	T	T	F	P	3	
284120600	OA90-11469	CBI571250	T	T	T	T	T	T	T	T	F	P	3	
284120600	OA90-11496	CBI251395	T	T	T	T	T	T	T	T	F	P	3	
284120600	OA90-25470	CBI84819	T	T	T	T	T	T	T	T	F	P	3	
284120600	OA90-36742	CBI476306	T	T	T	T	T	T	T	T	F	P	3	
284120600	OA90-6215	CBI964963	T	T	T	T	T	T	T	T	F	P	3	
284120900	N0105001	abrasive cleaner, liquid	T	T	T	T	T	T	T	T	F	P	3	
284120900	N0105002	abrasive cleaner, liquid	T	T	T	T	T	T	T	T	F	P	3	
284120900	N0105003	abrasive cleaner, liquid	T	T	T	T	T	T	T	T	F	P	3	
284120900	N0105004	abrasive cleaner, liquid	T	T	T	T	T	T	T	T	F	P	3	
284120900	N0111008	hard surf clean-allpurp-creamy-high qua	T	T	T	T	T	T	T	T	F	P	3	
284120900	N0111009	hard surf clean-allpurp-creamy-good qua	T	T	T	T	T	T	T	T	F	P	3	
284120900	N0113001	abrasive cleaner - high viscosity	T	T	T	T	T	T	T	T	F	P	3	
284121100	N0102013	high active dishwashing detergent (30%)	T	T	T	T	F	F	T	T	F	P	2	6
284121100	N0102014	dishwash detergent (30%) w/ conditioner	T	T	T	T	F	F	T	T	F	P	2	6
284121100	N0102027	dishwashing detergent (24%)	T	T	T	T	F	F	T	T	F	P	2	6
284121100	N0102028	pearlescent dishwashing detergent	T	T	T	T	F	F	T	T	F	P	2	6
284121100	N0102031	generic dishwashing detergent (14%)	T	T	T	T	F	F	T	T	F	P	2	6
284121100	N0102032	medium active dishwashing detergent	T	T	T	T	F	F	T	T	F	P	2	6
284121100	N0105045	general cleaner - alkaline cleaner	T	T	T	T	T	T	T	T	F	P	3	
284121100	N0113100	heavy duty pot & pan cleaner	T	T	T	T	F	F	T	T	F	P	2	6
284121100	N0113101	powdered caustic cleaner	T	T	T	T	F	F	T	T	F	P	2	6
284121100	OA90-10102	CBI706642	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-11129	CBI538410	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-19185	CBI989700	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-19195	CBI381972	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-19213	CBI728642	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-21050	CBI369681	T	T	T	T	T	T	T	T	F	P	3	

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284121100	OA90-22225	CBI700453	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-23159	CBI529914	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-24758	CBI916852	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-25674	CBI856678	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-2656	CBI744123	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-2860	CBI913894	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-2866	CBI112909	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-2869	CBI522035	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-28942	CBI535957	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-29364	CBI989425	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-29846	CBI612723	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-30897	CBI682508	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-30938	CBI105972	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-30947	CBI802764	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-30950	CBI63278	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-30965	CBI532254	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-30971	CBI664221	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-30995	CBI601788	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-36573	CBI201920	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-38845	CBI260996	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-38872	CBI986076	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-38945	CBI84011.	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-38947	CBI816963	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-38974	CBI104140	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-4251	CBI53829	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-43149	CBI63988	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-43320	CBI219198	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-5838	CBI16114	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-7808	CBI58450	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-8715	CBI438495	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-8719	CBI859865	T	T	T	T	T	T	T	T	F	P	3	
284121100	OA90-8731	CBI932368	T	T	T	T	T	T	T	T	F	P	3	
284122000	OA90-13233	CBI934257	T	F	T	T	F	F	T	F	F	P	2	1
284122000	OA90-38885	CBI727546	T	F	T	T	F	F	T	F	F	P	2	1
284122000	OA90-4865	CBI159223	T	F	T	T	F	F	T	F	F	P	2	1
284122000	OA90-8676	CBI718710	T	F	T	T	F	F	T	F	F	P	2	1
284122000	OA90-8678	CBI443806	T	F	T	T	F	F	T	F	F	P	2	1
284122000	OA90-8684	CBI294587	T	F	T	T	F	F	T	F	F	P	2	1
284122100	N0106018	dry laundry powd. w/phosph-good quality	T	F	T	T	F	F	T	F	F	P	2	1
284122400	N0106015	dry laundry powd. w/phosph-prem-hd-1/4c	T	F	T	T	F	F	T	F	F	P	2	1
284122400	N0106016	dry laundry powd. w/phosph-high-hd-1/4c	T	F	T	T	F	F	T	F	F	P	2	1
284122400	N0106017	dry laundry powd. w/phosph-prem-hd-1/2c	T	F	T	T	F	F	T	F	F	P	2	1
284122400	N0106019	dry laundry powd. w/phosph-good-hd-1/2c	T	F	T	T	F	F	T	F	F	P	2	1
284122400	N0106020	dry laundry powd. w/phosph-reg-hd-1/2c.	T	F	T	T	F	F	T	F	F	P	2	1
284122400	N0106026	heavy duty powder	T	F	T	T	F	F	T	F	F	P	2	1
284122400	N0106035	heavy duty powdered laundry detergent	T	F	T	T	F	F	T	F	F	P	2	1
284122400	N0106041	laundry detergent	T	F	T	T	F	F	T	F	F	P	2	1
284122400	N0106119	powder laundry detergent phosphate type	T	F	T	T	F	F	T	F	F	P	2	1
284122600	N0106033	hvydy phosphate free laundry powder-a	T	F	T	T	F	F	T	F	F	P	2	1
284122600	N0106034	hvydy phosphate free laundry powder-b	T	F	T	T	F	F	T	F	F	P	2	1
284122600	N0106040	laundry detergent	T	F	T	T	F	F	T	F	F	P	2	1
284122600	N0106114	non-phos dry laund powder-prem-hd-1/4c	T	F	T	T	F	F	T	F	F	P	2	1
284122600	N0106115	non-phos dry laund powder-good-hd-1/4c	T	F	T	T	F	F	T	F	F	P	2	1
284122600	N0106116	non-phos dry laund powder-prem-hd-1/2c	T	F	T	T	F	F	T	F	F	P	2	1
284122600	N0106117	non-phos dry laund powder-good-hd-1/2c	T	F	T	T	F	F	T	F	F	P	2	1
284122600	N0106118	non-phos dry laund powder-econ-hd-1/2c	T	F	T	T	F	F	T	F	F	P	2	1
284122600	N0106120	powder laundry deterg - non-phosph type	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-10008	CBI666939	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-10137	CBI642981	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-10793	CBI304045	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-11152	CBI725892	T	F	T	T	F	F	T	F	F	P	2	1

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284123000	OA90-11165	CBI465330	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-11364	CBI214112	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-11371	CBI335201	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-13235	CBI906590	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-13237	CBI338069	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-13240	CBI296640	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-13242	CBI174120	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-20737	CBI4	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-21844	CBI484300	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-22105	CBI156608	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-23237	CBI690022	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-25439	CBI195085	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-29908	CBI34440	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-30894	CBI193904	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-30981	CBI608650	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-30984	CBI455574	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-35451	CBI181094	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-37750	CBI337405	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-38903	CBI74233	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-38958	CBI2382	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-38969	CBI967986	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-39084	CBI694423	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-42857	CBI450753	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-4998	CBI513032	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-5847	CBI270491	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-731	CBI742759	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-7652	CBI746638	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-8694	CBI323057	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-9964	CBI933581	T	F	T	T	F	F	T	F	F	P	2	1
284123000	OA90-9966	CBI2055	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106001	cold water detergent-wool&delicate fabr	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106003	deterg.for finefabrics(clear,liq. no ph	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106004	deterg.for finefabrics(liq. no phosphat	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106005	deterg.for finefabrics(liq. with phosph	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106006	fine fabric wash detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106007	detergent paste with phosphate	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106008	detergent paste without phosphate	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106009	detergent-softener 1/4 c. formulation a	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106010	detergent-softener 1/4 c. formulation b	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106011	detergent-softener 1/4 c. formulation c	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106012	detergent-softener 1/2 c. formulation d	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106013	detergent-softener 1/2 c. formulation e	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106014	detergent-softener 1/2 c. formulation f	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106021	hand wash laundry liquid-moderate foam	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106022	handwash laund. liq-high foam,extra mil	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106045	laundry liquid concentrate-good quality	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106046	laundry liquid concentrate-store brand	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106047	laundry liquid concentrate-economy	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106048	laundry liquid concentrate-generic	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106049	laundry liquid with enzymes-premium qua	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106050	laundry liquid with enzymes-good qual	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106051	laundry liq. w/fabric softener-prem qua	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106052	laundry liq. w/fabric softener-prem qua	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106053	laundry liq. w/fabric softener-good qua	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106054	laundry liq. w/fabric softener & enzyme	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106055	laundry paste	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106056	light duty liquid detergent-clear,liqui	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106061	light duty liquid	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106062	light duty liquid-transparent-20% a.m.	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106063	lt dty liq deterg-transparent-35% a.m.	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106064	liquid detergent-softener-1/2c.-formula	T	F	T	T	F	F	T	F	F	P	2	1



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284123100	N0106065	liquid detergent-softener-1/2c-formulai	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106066	liquid deterg-softener-1/2c-formula iii	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106067	liquid deterg-softener-1/2c-formula iv	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106068	liquid deterg-softener-1/2c-formula v	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106069	liquid deterg-softener-1/2c-formula vi	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106070	liquid deterg-softener-1/2c-formula vii	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106071	liquid deterg-softener-1/4c-formula i	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106072	liquid deterg-softener-1/4c-formula ii	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106073	liquid deterg-softener-1/4c-formula iii	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106074	liquid deterg-softener-1/4c-formula iv	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106075	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106076	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106077	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106078	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106079	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106080	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106081	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106082	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106083	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106084	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106085	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106086	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106087	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106088	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106089	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106090	liquid detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106106	liq laund deterg-1/4c-mod suds-unbuilt	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106107	liq laund deterg-1/4c-mod suds-unbuilt	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106108	liq laund deterg-1/4c-soft, anti-stat	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106109	liq laund deterg-1/4c-mod suds-unbuilt	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106110	liq laund deterg-1/2c-mod suds-unbuilt	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106111	liquid laundry detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106112	liquid laundry detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106125	unbuilt laundry liquid-super prem qual	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106126	unbuilt laundry liquid-premium qual	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106127	unbuilt laundry liquid-premium qual	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106128	unbuilt laundry liquid-regular qual	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106129	1/2 c. built laundry liquid-high qualif	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106130	1/2 c. built laundry liquid-high qualif	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0106131	1/2c built laund liq-high qual,high foa	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0312067	synthetic liquid hand soap	T	F	T	T	F	F	T	F	F	P	2	1
284123100	N0312068	synthetic liquid hand soap	T	F	T	T	F	F	T	F	F	P	2	1
284123500	N0106025	hvy dty liq detergent-transprnt,no buil	T	F	T	T	F	F	T	F	F	P	2	1
284123500	N0106027	heavy duty liquid laundry detergent-hdl	T	F	T	T	F	F	T	F	F	P	2	1
284123500	N0106028	heavy duty liquid without phosphate	T	F	T	T	F	F	T	F	F	P	2	1
284123500	N0106029	hvydty liq laund.deter.(36%)w/fabric so	T	F	T	T	F	F	T	F	F	P	2	1
284123500	N0106030	hvydty liq laund.deter.(36%)w/fabric so	T	F	T	T	F	F	T	F	F	P	2	1
284123500	N0106031	heavy duty liquid with phosphate	T	F	T	T	F	F	T	F	F	P	2	1
284123500	N0106032	hvydty liq deter-transprnt,with builder	T	F	T	T	F	F	T	F	F	P	2	1
284123500	N0106044	laundry liquid concentrate	T	F	T	T	F	F	T	F	F	P	2	1
284123500	N0106057	concentrated liquid laundry detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123500	N0106091	liquid laundry detergent	T	F	T	T	F	F	T	F	F	P	2	1
284123500	N0106113	heavy duty liquid laundry detergent	T	F	T	T	F	F	T	F	F	P	2	1
284126100	IA000084	Amway Prewash Spray	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106101	laundry pre-spotter (water based)	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106102	laundry pre-spotter (water based)	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106103	laundry pre-spotter (water based)	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106104	laundry pre-spotter (water based)	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106105	laundry pre-spotter	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106132	laundry prespotter	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106133	laundry prespotter - aerosol	T	F	T	T	F	F	T	F	F	P	2	1

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284126100	N0106134	aerosol-type prespotter-solv based-prem	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106135	aerosol-type prespotter-solv based-high	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106136	aerosol-type prespotter-solv based-high	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106137	laundry prespotter-pump spray type-prem	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106138	laundry prespotter-pump spray type-prem	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106139	pump spray prespotter-waterbased-good	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106140	pump spray prespotter-waterbased-regula	T	F	T	T	F	F	T	F	F	P	2	1
284126100	N0106141	pump spray prespotter-waterbased-econom	T	F	T	T	F	F	T	F	F	P	2	1
284126100	OA90-18492	CBI957983	T	F	T	T	F	F	T	F	F	P	2	1
284126100	OA90-19359	CBI36972	T	F	T	T	F	F	T	F	F	P	2	1
284126100	OA90-719	CBI745132	T	F	T	T	F	F	T	F	F	P	2	1
284131300	N0312001	all purpose shower soap	T	T	T	T	F	F	T	T	F	P	3	
284131300	N0312003	bar soap	T	T	T	T	F	F	T	T	F	P	3	
284131300	N0312004	bar soap	T	T	T	T	F	F	T	T	F	P	3	
284131300	N0312005	bar soap	T	T	T	T	F	F	T	T	F	P	3	
284131300	N0312006	bar soap	T	T	T	T	F	F	T	T	F	P	3	
284131300	N0312007	bar soap	T	T	T	T	F	F	T	T	F	P	3	
284131300	N0312008	syndet bar	T	T	T	T	F	F	T	T	F	P	3	
284131300	N0312013	hand soap	T	T	T	T	F	F	T	T	F	P	3	
284131300	N0312015	conditioning soap bar	T	T	T	T	F	F	T	T	F	P	3	
284131300	N0312062	syndet soap	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312002	liquid hand soap	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312009	C14-16 olefin sulfonate liquid handsoap	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312010	clear liquid handsoap with conditioner	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312011	liquid handsoap with p-chloro-m-xlenol	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312012	cold-blend liquid hand-soap	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312014	conditioning liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312018	deodorizing liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312019	transparent liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312030	liquid body soap	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312033	liquid cream soap	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312043	liquid hand soap	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312044	liquid hand soap	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312046	liquid handsoap-extr rich foam prem qua	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312047	liquid handsoap-extr rich foam good qua	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312048	liq hndsoap-rich foam extr mld prem qua	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312049	liq hndsoap-rich foam extr mld good qua	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312050	liq hndsoap-rich foam extr mld good qua	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312051	liquid hand soap with emollients	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312053	liquid handsoap with p-chloro-m-xlenol	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312054	liquid handsoap with conditioner	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312055	liquid handsoap with desonic CE-12	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312058	liquid hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284131500	N0312078	liquid hand soap	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-11872	CBI952726	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-13670	CBI936204	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-14485	CBI581097	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-1728	CBI856113	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-1731	CBI158898	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-1733	CBI166699	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-1736	CBI521473	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-1739	CBI808744	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-18113	CBI807103	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-19123	CBI460938	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-19316	CBI173011	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-19384	CBI746921	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-19391	CBI815340	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-20089	CBI508127	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-20754	CBI237555	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-20761	CBI510720	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-20764	CBI863804	T	T	T	T	F	F	T	T	F	P	3	

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284131500	OA90-20772	CBI705156	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-20787	CBI270638	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-22238	CBI414720	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-22256	CBI21926	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-24339	CBI426827	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-27394	CBI518969	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-27395	CBI788289	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-29615	CBI873256	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-31965	CBI882407	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-32938	CBI565013	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-33047	CBI768448	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-33475	CBI28863	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-33486	CBI156153	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-33991	CBI675197	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-34211	CBI461003	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-34223	CBI187108	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-34225	CBI29178	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-36495	CBI203071	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-36500	CBI328392	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-36506	CBI865314	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-38901	CBI483752	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-43708	CBI144641	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-5774	CBI170172	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-6482	CBI656110	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-7334	CBI519662	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-7425	CBI486754	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-7428	CBI959238	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-9	CBI848608	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-9438	CBI7744	T	T	T	T	F	F	T	T	F	P	3	
284131500	OA90-95	CBI883489	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312016	cosmetic waterless hand cleanser	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312017	waterless hand-cleanser, gel-type	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312020	economy hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312021	waterless hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312022	hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312023	liquid waterless hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312024	hand cleaner gel	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312025	hand cleaner gel	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312026	hand cleaning gel (contains solvent)	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312027	handcleanser-clear-12% active detergent	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312028	liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312029	handwashing-paste-clear-gel-solvent	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312031	heavy duty hand cleaner with abrasive	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312032	waterless hand cleaner with abrasive	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312034	emollient detergent cream soap	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312035	liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312036	liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312037	liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312038	liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312039	liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312040	liquid soap-silky-20% active detergent	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312041	liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312042	liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312045	liquid hand "soap"	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312056	liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312057	extra mild liquid soap	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312059	liquid soap-clear-7.1% active detergent	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312060	liquid soap-pearl lust-10% active deter	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312061	liquid soap with disinfectant effect	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312063	gel hand cleaner waterless	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312064	liquid waterless hand cleaner	T	T	T	T	F	F	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284139800	N0312065	gel hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312066	workshop hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312069	waterless hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312070	waterless hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312071	waterless hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312072	waterless hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312073	waterless hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312074	waterless hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312075	waterless hand cleaner	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312076	waterless hand cleaner-A	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312077	waterless hand cleaner-B	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312079	waterless hand cleaner-A	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312080	waterless hand cleaner-B	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312081	waterless hand cleaner-A	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312082	waterless hand cleaner-B	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312083	waterless hand cleaner-C	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312084	waterless hand cleaner emulsion type-1	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312085	waterless hand cleaner emulsion type-2	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312086	waterless hand cleaner emulsion type-3	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312087	waterless hand cleaner emulsion type-4	T	T	T	T	F	F	T	T	F	P	3	
284139800	N0312088	waterless hand cleaner base	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-10470	CBI106434	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-12870	CBI713537	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-12988	CBI311099	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-14563	CBI516338	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-15075	CBI998415	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-17720	CBI648925	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-17724	CBI747918	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-17740	CBI948586	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-17767	CBI934644	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-18091	CBI982977	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-19291	CBI136239	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-20751	CBI791043	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-20767	CBI532374	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-20779	CBI85491	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-20783	CBI983272	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-24248	CBI422833	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-25182	CBI131791	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-25748	CBI806007	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-29187	CBI408410	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-29977	CBI34012	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-34243	CBI129104	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-35480	CBI181066	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-37730	CBI226474	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-38505	CBI175019	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-41078	CBI710973	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-41081	CBI673850	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-6991	CBI343656	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-737	CBI700970	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-740	CBI691323	T	T	T	T	F	F	T	T	F	P	3	
284139800	OA90-9880	CBI324708	T	T	T	T	F	F	T	T	F	P	3	
284231100	N0112001	acid glass cleaner b-1	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112002	multi-feature glass cleaner	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112003	ammoniacal "windex" b type	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112004	window/glass cleaner - good quality	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112005	glass cleaner	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112006	glass cleaner - all purpose	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112007	glass cleaner - all purpose	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112008	glass cleaner - all purpose	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112009	glass cleaner - ready to use	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112010	glass cleaner	T	T	T	T	T	T	T	T	T	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284231100	N0112011	glass cleaner - general purpose type	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112012	glass cleaner - concentrate	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112013	industrial glass cleaner	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112014	liquid glass cleaner	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112015	window/glass clnr - good qual - alcohol	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112016	window & glass cleaner	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112017	window cleaner	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112018	window cleaner - pump dispensing	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112019	window cleaner	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112020	window cleaner - aerosol - foam	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112021	window cleaner - high alcohol type	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112022	window cleaner - concentrate	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112023	window cleaner - spray	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0112024	window cleaner - spray	T	T	T	T	T	T	T	T	T	P	3	
284231100	N0116003	automobile windshield cleaners	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116004	automobile windshield cleaners	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116005	automobile windshield cleaners	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116006	automobile windshield cleaners	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116012	windshield washer cleaners - high qual	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116013	windshield washer cleaners - good qual	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116014	windshield washer cleaners - winter use	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116015	windshield washer formula i - summer	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116016	windshield washer formula ii - summer	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116017	windshield washer formula iii - summer	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116018	windshield washer formula iv - winter	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116019	windshield washer formula v - winter	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116020	windshield wash	T	F	F	F	F	F	F	F	F	T	P	3
284231100	N0116021	windshield washer formulation	T	F	F	F	F	F	F	F	F	T	P	3
284231100	OA90-10036	CBI866121	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-10285	CBI751515	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-10354	CBI515424	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-10412	CBI19996.	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-10480	CBI233053	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-1068	CBI663500	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-1071	CBI55821	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-10835	CBI92495	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-11145	CBI32039	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-11311	CBI148101	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-11341	CBI799290	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-11408	CBI574473	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-11437	CBI807518	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-11868	CBI59141	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-11870	CBI21687	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-12098	CBI734506	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-12172	CBI682407	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-12237	CBI451356	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-12887	CBI989211	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-13295	CBI811544	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-13391	CBI1076	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-1351	CBI995245	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-13642	CBI806459	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-14048	CBI946119	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-14087	CBI245823	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-14371	CBI49002	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-14420	CBI602023	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-14475	CBI172219	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-14483	CBI326250	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-14559	CBI634838	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-14580	CBI930457	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-14586	CBI3066	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-15055	CBI744433	T	T	T	T	T	T	T	T	T	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284231100	OA90-15565	CBI455228	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-16362	CBI156057	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-16885	CBI941443	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-16925	CBI840819	T	F	F	F	F	F	F	F	F	P	3	
284231100	OA90-17094	CBI395868	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-17246	CBI234914	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-17483	CBI816986	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-17573	CBI537291	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-17628	CBI748970	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-17906	CBI20444.	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18068	CBI477395	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18467	CBI276095	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18473	CBI811061	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18489	CBI516943	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18513	CBI71729	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18523	CBI318513	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18574	CBI578829	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18694	CBI303181	T	F	F	F	F	F	F	F	F	P	3	
284231100	OA90-18764	CBI847874	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18767	CBI318034	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18791	CBI998510	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18818	CBI669006	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18833	CBI873818	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18843	CBI715973	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18933	CBI188166	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-18982	CBI955694	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-19081	CBI589719	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-19128	CBI194911	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-19198	CBI874247	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-19309	CBI600224	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-19340	CBI97066	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-19353	CBI120269	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-19367	CBI582900	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-19467	CBI921290	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-19470	CBI382724	T	F	F	F	F	F	F	F	F	P	3	
284231100	OA90-19580	CBI419096	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-19582	CBI996796	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-19910	CBI2	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-19980	CBI544395	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-20042	CBI555044	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-20091	CBI308039	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-20102	CBI410519	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-20108	CBI615596	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-214	CBI24219	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-21642	CBI643346	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-21675	CBI948584	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-21691	CBI494793	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-21693	CBI912179	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-21817	CBI891094	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-21821	CBI173852	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-22057	CBI500504	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-22280	CBI458799	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-22336	CBI160464	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-22455	CBI321275	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-22668	CBI714349	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-22671	CBI475264	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-22678	CBI165952	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-23276	CBI501206	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-23402	CBI399131	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-23408	CBI305124	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-23633	CBI180010	T	T	T	T	T	T	T	T	T	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284231100	OA90-23656	CBI240042	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-23777	CBI880823	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24185	CBI663616	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24187	CBI949243	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24301	CBI907596	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24303	CBI152072	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24334	CBI755541	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24336	CBI45434	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24706	CBI217934	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24760	CBI29520	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24785	CBI535667	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24838	CBI161257	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24841	CBI330511	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24975	CBI921572	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24978	CBI395727	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-24980	CBI573054	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-25187	CBI642759	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-2523	CBI266453	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-25234	CBI392022	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-2526	CBI206191	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-25437	CBI650304	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-25563	CBI114743	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-25570	CBI571879	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-25619	CBI28391	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-25667	CBI674616	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-26285	CBI988744	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-26332	CBI761142	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-27470	CBI470490	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-27494	CBI427952	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-27498	CBI30635	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-27501	CBI246246	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-2755	CBI141743	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-2757	CBI764221	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-2760	CBI81407	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-27932	CBI770161	T	F	F	F	F	F	F	F	F	P	3	
284231100	OA90-27934	CBI263257	T	F	F	F	F	F	F	F	F	P	3	
284231100	OA90-28026	CBI817519	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-2852	CBI418	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-28600	CBI668037	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-28730	CBI683484	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-28786	CBI990188	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-28820	CBI502151	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-28859	CBI542596	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-28889	CBI345167	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29071	CBI394238	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-2926	CBI382078	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29351	CBI349768	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29515	CBI380682	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29537	CBI928444	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-2955	CBI296152	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29589	CBI128253	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29596	CBI699520	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29599	CBI195772	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29621	CBI503945	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29624	CBI160123	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29641	CBI250924	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29660	CBI150787	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29669	CBI435230	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29715	CBI191927	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29759	CBI373966	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29778	CBI390831	T	T	T	T	T	T	T	T	T	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284231100	OA90-29809	CBI5869	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29820	CBI178593	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29905	CBI347908	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29941	CBI550461	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-29943	CBI896063	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-30044	CBI376848	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-3010	CBI393753	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-30154	CBI231642	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-30368	CBI198648	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-3047	CBI99302	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-30906	CBI556059	T	F	F	F	F	F	F	F	F	P	3	
284231100	OA90-30958	CBI498240	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-30960	CBI727561	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-30967	CBI303402	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-31004	CBI716054	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-31087	CBI658842	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-31125	CBI564568	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-31572	CBI999164	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-31707	CBI718653	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-31710	CBI435893	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-31763	CBI360928	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-31836	CBI507281	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-31855	CBI128262	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-31858	CBI992951	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-31891	CBI317750	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-3220	CBI788185	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32204	CBI185973	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-3224	CBI85625	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32412	CBI708733	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-3258	CBI105734	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32672	CBI873082	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32731	CBI710260	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32734	CBI534554	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32741	CBI42024	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32794	CBI437458	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32797	CBI84702	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32835	CBI855860	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32860	CBI885969	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32890	CBI319410	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32930	CBI479302	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32958	CBI782174	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-32963	CBI720462	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-33457	CBI875521	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-33470	CBI781851	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-33483	CBI277928	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-33540	CBI579206	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-33542	CBI57783	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-33551	CBI568284	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-33617	CBI600200	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-33912	CBI792315	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-33914	CBI106225	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-33942	CBI531166	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-33962	CBI58693	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-34074	CBI518832	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-34144	CBI452431	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-34228	CBI157946	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-35326	CBI119912	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-35579	CBI19374	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-35581	CBI323858	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-35732	CBI776915	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-35929	CBI892909	T	T	T	T	T	T	T	T	T	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284231100	OA90-35950	CBI785445	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-35981	CBI972908	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-36008	CBI848176	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-36156	CBI428805	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-36270	CBI627328	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-37399	CBI471536	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-37402	CBI654094	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-37728	CBI22044	T	F	F	F	F	F	F	F	F	T	P	3
284231100	OA90-37744	CBI126304	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-37772	CBI156175	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-38108	CBI941355	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-38294	CBI1176	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-38296	CBI946282	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-38588	CBI686573	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-38642	CBI201902	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-38653	CBI35430	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-38655	CBI330976	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-38723	CBI916979	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-38820	CBI779065	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-38861	CBI9383	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-39070	CBI20468	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-39320	CBI958381	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-39343	CBI407350	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-39365	CBI67583	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-39387	CBI73970	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-402	CBI516193	T	F	F	F	F	F	F	F	F	T	P	3
284231100	OA90-40977	CBI895284	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-40980	CBI751990	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-41068	CBI249054	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-41330	CBI774814	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-41729	CBI882858	T	F	F	F	F	F	F	F	F	T	P	3
284231100	OA90-41774	CBI238884	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-41954	CBI581339	T	F	F	F	F	F	F	F	F	T	P	3
284231100	OA90-42006	CBI525528	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-42087	CBI760457	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-4212	CBI267890	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-42223	CBI761199	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-42383	CBI350346	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-42404	CBI242317	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-42486	CBI488000	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-42853	CBI442329	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-42937	CBI283781	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-43138	CBI757416	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-43158	CBI481690	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-43169	CBI550200	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-43171	CBI244919	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-43305	CBI384309	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-43373	CBI35181.	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-43447	CBI992142	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-4364	CBI136784	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-43894	CBI741281	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-4939	CBI895625	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-4953	CBI640006	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-5074	CBI593983	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-5229	CBI156711	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-5294	CBI571043	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-5297	CBI291007	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-5428	CBI145404	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-5446	CBI411729	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-5546	CBI389420	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-5550	CBI517891	T	T	T	T	T	T	T	T	T	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284231100	OA90-5600	CBI419073	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-5608	CBI358356	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-5610	CBI527884	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-5820	CBI554234	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-614	CBI858244	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-6352	CBI867748	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-6432	CBI5571	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-6555	CBI72785	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-658	CBI319632	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-6671	CBI935509	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-6786	CBI745286	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-6801	CBI425519	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-7050	CBI462806	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-7134	CBI426126	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-7341	CBI333031	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-7437	CBI569792	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-7439	CBI216640	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-7546	CBI298592	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-7618	CBI54138	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-7620	CBI449413	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-7661	CBI262862	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-7793	CBI381835	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-7796	CBI842546	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-794	CBI326809	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-8051	CBI148626	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-8057	CBI867571	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-8061	CBI406296	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-8434	CBI6955	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-8447	CBI55044	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-8579	CBI775145	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-8725	CBI690291	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-873	CBI35361	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-907	CBI677067	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-9103	CBI796514	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-9135	CBI431132	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-9304	CBI364108	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-9501	CBI82814	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-952	CBI370178	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-9887	CBI516933	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-9944	CBI185221	T	T	T	T	T	T	T	T	T	P	3	
284231100	OA90-9993	CBI382725	T	T	T	T	T	T	T	T	T	P	3	
284231100	RAD02201	Window Cleaner	T	T	T	T	T	T	T	T	T	P	3	
284231100	RAD02202	Window Cleaner	T	T	T	T	T	T	T	T	T	P	3	
284231100	RAD02203	Window Cleaner	T	T	T	T	T	T	T	T	T	P	3	
284231100	RAD02301	Anti-Fogging/Anti-Static Glass Cleaner	T	T	T	T	T	T	T	T	T	P	3	
284231100	RAD02302	Anti-Fogging/Anti-Static Glass Cleaner	T	T	T	T	T	T	T	T	T	P	3	
284231500	OA90-13354	CBI492520	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-13394	CBI803534	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-13841	CBI425746	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-14359	CBI106906	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-15546	CBI110171	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-1590	CBI407082	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-16528	CBI776266	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-16530	CBI401775	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-1657	CBI872907	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-17658	CBI515334	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-18704	CBI362044	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-18708	CBI668488	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-18779	CBI435055	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-19086	CBI540062	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-19357	CBI428954	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284231500	OA90-20131	CBI746780	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-21120	CBI999479	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-21623	CBI483444	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-21777	CBI330865	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-21779	CBI953426	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-21850	CBI825616	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-22204	CBI202304	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-22273	CBI597861	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-22327	CBI113568	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-22365	CBI521685	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-23226	CBI731055	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-23295	CBI506537	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-23603	CBI477350	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-25451	CBI740465	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-25617	CBI625214	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-28993	CBI769407	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-28997	CBI408530	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-29251	CBI775273	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-29253	CBI407602	T	F	F	F	F	F	F	F	F	T	P	3
284231500	OA90-29255	CBI960847	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-29711	CBI748535	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-30245	CBI924168	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-30248	CBI649492	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-30249	CBI801699	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-30250	CBI849343	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-30252	CBI108079	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-3060	CBI994563	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-31177	CBI127027	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-31179	CBI268220	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-3198	CBI479655	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-3211	CBI665875	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-32237	CBI626485	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-33206	CBI538740	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-34509	CBI322772	T	F	F	F	F	F	F	F	F	T	P	3
284231500	OA90-35767	CBI384061	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-36841	CBI542613	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-36843	CBI347581	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-37609	CBI40626.	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-37641	CBI46003	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-37643	CBI786156	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-37645	CBI108994	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-37647	CBI473788	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-37819	CBI846411	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-37821	CBI64848	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-3892	CBI14885	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-41234	CBI794415	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-41686	CBI492259	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-42276	CBI394664	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-42278	CBI556996	T	F	F	F	F	F	F	F	T	P	3	
284231500	OA90-42516	CBI371724	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-42835	CBI175392	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-43484	CBI706815	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-43736	CBI970836	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-43777	CBI368222	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-43779	CBI941183	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-4402	CBI691609	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-4986	CBI344518	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-5748	CBI293269	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-6259	CBI395978	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-6377	CBI722964	T	F	F	F	F	F	F	F	F	P	3	
284231500	OA90-6405	CBI52401	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284231500	OA90-7053	CBI575715	T	F	F	F	F	F	F	F	F	P	3	
284232100	IA000075	Dart Oven Cleaner	T	T	T	T	F	F	T	T	F	P	3	
284232100	IA000076	Dow Oven Cleaner	T	T	T	T	F	F	T	T	F	P	3	
284232100	IA000080	Amway Oven 'n' Grill Cleaner	T	T	T	T	F	F	T	T	F	P	3	
284232100	N0108001	aerosol oven cleaner	T	T	T	T	F	F	T	T	F	P	3	
284232100	N0108002	oven cleaner	T	T	T	T	F	F	T	T	F	P	3	
284232100	N0108003	oven cleaner	T	T	T	T	F	F	T	T	F	P	3	
284232100	N0108004	oven cleaner - liquid type	T	T	T	T	F	F	T	T	F	P	3	
284232100	N0108005	oven cleaner - (1) foam spray type	T	T	T	T	F	F	T	T	F	P	3	
284232100	N0108006	oven cleaner - (1)	T	T	T	T	F	F	T	T	F	P	3	
284232100	N0108007	oven cleaner	T	T	T	T	F	F	T	T	F	P	3	
284232100	N0108008	caustic cleaner (oven or paint stripper	T	T	T	T	F	F	T	T	F	P	3	
284232100	N0108009	caustic cleaner (oven or paint stripper	T	T	T	T	F	F	T	T	F	P	3	
284232100	N0108010	caustic cleaner (oven or paint stripper	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-10154	caustic cleaner (oven or paint stripper	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-10280	CBI726545	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-10715	CBI295802	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-10789	CBI256740	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-11346	CBI978218	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-13719	CBI635099	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-14459	CBI517326	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-16335	CBI220194	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-17545	CBI28189	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-19189	CBI922079	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-22652	CBI159728	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-23404	CBI197512	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-23631	CBI329004	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-23664	CBI338406	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-24397	CBI592061	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-24765	CBI258890	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-24787	CBI328155	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-2543	CBI278653	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-25692	CBI38593	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-2720	CBI286365	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-27502	CBI848468	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-2847	CBI306446	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-28796	CBI588653	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-30357	CBI521708	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-30361	CBI547016	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-30363	CBI413393	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-31811	CBI966276	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-33045	CBI204780	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-35291	CBI704131	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-35740	CBI46912	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-35852	CBI852778	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-35932	CBI475907	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-35990	CBI990375	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-38665	CBI345534	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-38680	CBI925123	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-38686	CBI739198	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-38936	CBI828240	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-3967	CBI557946	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-4295	CBI661468	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-4733	CBI14038	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-5757	CBI530331	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-7241	CBI440602	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-7688	CBI903799	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-8142	CBI556194	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-8598	CBI707344	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-9161	CBI397864	T	T	T	T	F	F	T	T	F	P	3	
284232100	OA90-9996	CBI399318	T	T	T	T	F	F	T	T	F	P	3	

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284232100	OA90-9999	CBI317620	T	T	T	T	F	F	T	T	F	P	3	
284232100	RAD02701	Oven Cleaner	T	T	T	T	F	F	T	T	F	P	3	
284232100	RAD02702	Oven Cleaner	T	T	T	T	F	F	T	T	F	P	3	
284232600	N0101001	acid tile & bath cleaner (pearlized)	T	T	T	T	T	T	T	T	F	P	2	2
284232600	N0101006	liquid acid toilet bowl cleaner	T	T	T	T	T	T	T	T	F	P	2	2
284232600	N0101007	liquid acid toilet bowl cleaner	T	T	T	T	T	T	T	T	F	P	2	2
284232600	N0101008	liquid acid-type toilet bowl cleaner	T	T	T	T	T	T	T	T	F	P	2	2
284232600	N0101009	pearlescent toilet bowl cleaner	T	T	T	T	T	T	T	T	F	P	2	2
284232600	N0101010	toilet bowl cleaner	T	T	T	T	T	T	T	T	F	P	2	2
284232600	N0101011	toilet bowl cleaner s-34	T	T	T	T	T	T	T	T	F	P	2	2
284232600	N0101012	toilet bowl cleaner-liquid	T	T	T	T	T	T	T	T	F	P	2	2
284232600	N0101013	toilet bowl cleaner-solid	T	T	T	T	T	T	T	T	F	P	2	2
284232600	N0101014	toilet bowl cleaner-solid automatic	T	T	T	T	T	T	T	T	F	P	2	2
284232600	N0101015	toilet bowl cleaner-solid automatic	T	T	T	T	T	T	T	T	F	P	2	2
284232600	N0101016	toilet bowl cleaner-solid automatic	T	T	T	T	T	T	T	T	F	P	2	2
284232600	N0113016	bowl cleaner	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-10064	CBI777945	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-11434	CBI984644	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-11459	CBI456855	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-24709	CBI391439	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-24771	CBI447288	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-25580	CBI376032	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-28818	CBI844965	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-30411	CBI957733	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-32782	CBI887270	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-32833	CBI626263	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-33581	CBI240976	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-39401	CBI269128	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-4416	CBI754930	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-4420	CBI334746	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-4423	CBI119085	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-7563	CBI752016	T	T	T	T	T	T	T	T	F	P	2	2
284232600	OA90-7728	CBI237198	T	T	T	T	T	T	T	T	F	P	2	2
284232800	IA000354	Drain Mate	T	T	T	T	T	T	T	T	F	P	2	2
284232800	N0113052	drain cleaner, liquid a	T	T	T	T	T	T	T	T	F	P	2	2
284232800	N0113053	drain cleaner, liquid b	T	T	T	T	T	T	T	T	F	P	2	2
284232800	N0113054	drain cleaner, liquid type	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-15066	CBI331614	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-15068	CBI383863	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-17978	CBI723700	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-17992	CBI342875	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-18045	CBI443682	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-18805	CBI639354	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-19355	CBI284972	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-20002	CBI275156	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-21638	CBI553440	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-23210	CBI564090	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-27437	CBI974005	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-30991	CBI407109	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-32042	CBI709757	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-34132	CBI364662	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-4755	CBI94472	T	T	T	T	T	T	T	T	F	P	2	2
284232800	OA90-821	CBI714494	T	T	T	T	T	T	T	T	F	P	2	2
284233000	OA90-10278	CBI501155	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-10320	CBI882736	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-11348	CBI649762	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-17111	CBI919562	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-17382	CBI868999	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-17565	CBI5146	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-17571	CBI32863	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-17581	CBI45577	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284233000	OA90-17761	CBI159360	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-19334	CBI262630	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-19564	CBI680507	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-20141	CBI68856.	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-20151	CBI592460	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-20821	CBI948017	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-20871	CBI415977	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-21810	CBI332356	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-23796	CBI102011	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-24894	CBI236945	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-2571	CBI78228	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-27512	CBI774721	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-27515	CBI885308	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-27517	CBI116206	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-27519	CBI874695	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-28804	CBI87539	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-28927	CBI751643	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-28970	CBI80236	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-29803	CBI845025	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-29881	CBI834101	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-32665	CBI718321	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-32667	CBI585279	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-3270	CBI382066	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-32725	CBI810216	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-32743	CBI707533	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-33601	CBI559356	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-35754	CBI613799	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-38737	CBI22326	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-39403	CBI351830	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-41727	CBI343532	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-4867	CBI117424	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-7539	CBI36822	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-7582	CBI422668	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-7606	CBI557558	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-887	CBI557242	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-9143	CBI292793	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-9196	CBI472730	T	T	T	T	T	T	T	T	F	P	3	
284233000	OA90-9925	CBI49828	T	T	T	T	T	T	T	T	F	P	3	
284233200	N0103001	disinfectant cleaner	T	T	T	T	T	T	T	T	F	P	3	
284233200	N0103002	general disinfectant solution	T	T	T	T	T	T	T	T	F	P	3	
284233200	N0103003	general disinfectant	T	T	T	T	T	T	T	T	F	P	3	
284233200	N0103004	disinfectant cleaners,liquid conc.	T	T	T	T	T	T	T	T	F	P	3	
284233200	N0103005	hospital/clinical strength	F	F	T	T	F	F	F	F	F	P	3	
284233200	N0103006	non-phosphate liquid concentrate	T	T	T	T	T	T	T	T	F	P	3	
284233200	N0103007	hospital disinfectant	F	F	T	T	F	F	F	F	F	P	3	
284233200	N0103008	sanitizer - liquid, acid	T	T	T	T	T	T	T	T	F	P	3	
284233200	N0103009	sanitizer (also for spray)-liquid, clea	T	T	T	T	T	T	T	T	F	P	3	
284233200	N0103010	sanitizer:liquid, cloudy, w/ chlorine	T	T	T	T	T	T	T	T	F	P	3	
284233200	N0103011	sanitizing cleaner (liquid)	T	T	T	T	T	T	T	T	F	P	3	
284233200	OA90-10002	CBI820511	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-10030	CBI371189	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-10067	CBI40810	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-10126	CBI756633	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-10229	CBI819317	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-10231	CBI143072	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-10233	CBI14567	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-10254	CBI438452	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-10488	CBI907858	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-10852	CBI765652	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-10855	CBI702839	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-10857	CBI262294	T	T	T	T	F	F	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284233200	OA90-11137	CBI348748	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-11139	CBI675738	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-11150	CBI496540	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-11320	CBI680611	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-11399	CBI795879	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-11452	CBI373448	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-11487	CBI4664	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-13621	CBI76612	F	F	T	T	F	F	F	F	F	P	3	
284233200	OA90-14054	CBI269197	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-14414	CBI489491	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-14590	CBI710597	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-14813	CBI983710	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-14817	CBI551499	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-14819	CBI835706	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-14828	CBI906565	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-14830	CBI957736	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-16169	CBI615235	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-16299	CBI711910	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-16400	CBI135394	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-16402	CBI150081	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-16418	CBI697741	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-16421	CBI300242	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-17277	CBI881867	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-17378	CBI3789	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-17453	CBI87933	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-17459	CBI678964	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-17491	CBI943167	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-17585	CBI549030	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-17863	CBI492114	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-17928	CBI37513	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-17930	CBI854854	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-17932	CBI905479	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18052	CBI931189	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18120	CBI271670	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-1820	CBI776175	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18205	CBI450588	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18207	CBI625822	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18210	CBI461353	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-1824	CBI807879	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18394	CBI107903	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18525	CBI173793	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18774	CBI884579	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18795	CBI88940	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18822	CBI58921	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18828	CBI688411	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18830	CBI902757	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18855	CBI85538	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18859	CBI412962	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-18984	CBI485143	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-19382	CBI401355	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-19536	CBI726480	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-19916	CBI259062	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-19921	CBI957758	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-19924	CBI967797	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-20067	CBI683624	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-20269	CBI900140	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-20271	CBI416598	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-20273	CBI142796	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-20643	CBI197879	F	F	T	T	F	F	F	F	F	P	3	
284233200	OA90-20645	CBI288503	F	F	T	T	F	F	F	F	F	P	3	
284233200	OA90-20647	CBI606460	F	F	T	T	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284233200	OA90-20649	CBI541063	F	F	T	T	F	F	F	F	F	P	3	
284233200	OA90-20745	CBI784313	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-21414	CBI544606	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-21417	CBI754776	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-21499	CBI421968	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-21504	CBI381489	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-21652	CBI388396	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-22662	CBI227714	T	T	T	T	T	T	T	T	F	P	3	
284233200	OA90-22702	CBI841679	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-22874	CBI797531	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-22876	CBI99052	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-22884	CBI163848	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-22889	CBI693984	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-22913	CBI425553	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-22915	CBI257693	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-22937	CBI459565	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-22940	CBI912385	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-22942	CBI781239	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-22949	CBI308184	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-23282	CBI154470	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-23288	CBI355304	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-23449	CBI654967	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-23456	CBI169303	F	F	T	T	F	F	F	F	F	P	3	
284233200	OA90-2351	CBI541193	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-2358	CBI224427	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-23684	CBI834212	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-23689	CBI753147	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-23732	CBI480170	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-23754	CBI80092	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24412	CBI709684	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24444	CBI428057	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24530	CBI759867	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24637	CBI69915	F	F	T	T	F	F	F	F	F	P	3	
284233200	OA90-24680	CBI951223	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24750	CBI831737	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24769	CBI182766	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24789	CBI312935	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24792	CBI661254	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24795	CBI372451	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24812	CBI577307	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24815	CBI676598	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24818	CBI242121	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24820	CBI841135	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24874	CBI352739	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24905	CBI169545	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-2491	CBI440715	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24915	CBI163139	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24918	CBI921062	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24934	CBI381365	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24969	CBI781568	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-24999	CBI799012	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-2500	CBI483941	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-25001	CBI849939	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-2503	CBI653982	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-25472	CBI262650	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-25544	CBI913896	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-25549	CBI770681	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-25577	CBI708274	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-25659	CBI501456	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-27376	CBI463332	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-27378	CBI592492	T	T	T	T	F	F	T	T	F	P	3	



Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284233200	OA90-28756	CBI604057	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-28845	CBI704640	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-28893	CBI584349	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-28918	CBI721600	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-28922	CBI851483	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-29064	CBI688065	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-29191	CBI86679	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-29360	CBI932047	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-30040	CBI263462	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-30070	CBI936729	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-30945	CBI729417	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-31497	CBI63591	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-31552	CBI305802	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-31735	CBI693926	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-31772	CBI784778	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-31945	CBI526090	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-32115	CBI386986	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-32117	CBI351034	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-32722	CBI828913	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-32727	CBI934193	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-32942	CBI301810	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-32944	CBI466425	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-32973	CBI371862	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-33021	CBI772086	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-33502	CBI546361	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-33538	CBI531194	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-34157	CBI870008	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-34599	CBI765281	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-35547	CBI831323	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-35555	CBI440843	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-35565	CBI27413	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-35567	CBI724209	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-35750	CBI842260	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-35770	CBI943966	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-35774	CBI441907	F	F	T	T	F	F	F	F	F	P	3	
284233200	OA90-35903	CBI526749	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-36253	CBI424926	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-36293	CBI784977	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-36542	CBI636075	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-36571	CBI809127	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-36580	CBI403537	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-36879	CBI486446	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-37356	CBI345627	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-37359	CBI384000	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-37361	CBI387814	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-37364	CBI108521	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-37367	CBI817203	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-37688	CBI976955	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-37762	CBI456252	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-37840	CBI921701	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-37947	CBI923966	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-38289	CBI336530	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-38631	CBI509698	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-38651	CBI368922	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-38695	CBI960753	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-38841	CBI147214	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-38843	CBI301884	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-38881	CBI254525	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-39068	CBI15323	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-39323	CBI368652	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-39336	CBI264326	T	T	T	T	F	F	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284233200	OA90-39419	CBI949390	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-4207	CBI442534	F	F	T	T	F	F	F	F	F	P	3	
284233200	OA90-42109	CBI259307	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42111	CBI495391	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42114	CBI535892	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42117	CBI507944	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42120	CBI998592	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42123	CBI488240	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42125	CBI256440	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42132	CBI354668	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42239	CBI603832	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42253	CBI521287	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42658	CBI227096	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42664	CBI816267	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42667	CBI915582	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-4279	CBI863967	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-4283	CBI139164	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42841	CBI151736	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-4286	CBI96045	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-4289	CBI113635	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-42988	CBI945468	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-43259	CBI340816	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-43261	CBI823871	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-43284	CBI13149	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-43287	CBI6343	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-43290	CBI162795	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-43293	CBI170739	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-43298	CBI166318	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-43302	CBI249731	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-43910	CBI234559	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-4879	CBI172573	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-4899	CBI593742	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-4901	CBI515193	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-5451	CBI170679	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-5453	CBI408977	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-5614	CBI858198	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-645	CBI625852	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-648	CBI170025	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-6605	CBI311805	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-6607	CBI844059	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-6804	CBI355377	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7034	CBI43015	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7037	CBI69288	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7042	CBI207477	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7048	CBI425516	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7167	CBI370756	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7189	CBI425319	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7227	CBI158848	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7229	CBI630555	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7256	CBI545353	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7287	CBI531841	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7366	CBI869060	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7377	CBI879116	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7379	CBI910906	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7526	CBI435526	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7584	CBI486479	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7598	CBI114980	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7608	CBI576264	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7624	CBI244095	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7630	CBI879111	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7635	CBI807870	T	T	T	T	F	F	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284233200	OA90-7637	CBI587043	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7647	CBI234257	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7667	CBI174945	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7680	CBI29147	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7695	CBI578987	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7706	CBI272756	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7708	CBI548352	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7735	CBI537807	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7750	CBI604339	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7803	CBI462069	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-7871	CBI531635	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-824	CBI759509	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-8241	CBI887817	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-8245	CBI44852	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-8527	CBI287100	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-8813	CBI788959	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-8821	CBI613737	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-9080	CBI750863	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-9093	CBI39177	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-9132	CBI39631	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-9146	CBI224009	T	T	T	T	F	F	T	T	F	P	3	
284233200	OA90-9984	CBI396053	T	T	T	T	F	F	T	T	F	P	3	
284233200	RAD03201	Disinfectant Spray Cleaner	T	T	T	T	T	T	T	T	F	P	3	
284234400	OA90-11206	CBI860540	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-11882	CBI351427	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-11884	CBI757772	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-11886	CBI963858	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-13246	CBI394018	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-13251	CBI524503	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-19012	CBI293840	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-19219	CBI788223	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-20741	CBI474874	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-23181	CBI385657	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-30381	CBI138510	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-35454	CBI236329	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-35460	CBI415738	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-35466	CBI507773	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-38829	CBI798449	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-38847	CBI37844	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-38849	CBI200582	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-38851	CBI642297	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-38891	CBI762541	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-38894	CBI614413	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-38905	CBI385972	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-9973	CBI747007	T	F	T	T	F	F	T	F	F	P	2	1
284234400	OA90-9990	CBI970950	T	F	T	T	F	F	T	F	F	P	2	1
284234800	OA90-11239	CBI670604	T	F	T	T	F	F	T	F	F	P	3	
284234800	OA90-11328	CBI377410	T	F	T	T	F	F	T	F	F	P	3	
284234800	OA90-13276	CBI225517	T	F	T	T	F	F	T	F	F	P	3	
284234800	OA90-13723	CBI26527	T	F	T	T	F	F	T	F	F	P	3	
284234800	OA90-30365	CBI258346	T	F	T	T	F	F	T	F	F	P	3	
284234800	OA90-37765	CBI247718	T	F	T	T	F	F	T	F	F	P	3	
284234800	OA90-38519	CBI789040	T	F	T	T	F	F	T	F	F	P	3	
284234800	OA90-6171	CBI267811	T	F	T	T	F	F	T	F	F	P	3	
284234800	OA90-6173	CBI216395	T	F	T	T	F	F	T	F	F	P	3	
284234800	OA90-6175	CBI439307	T	F	T	T	F	F	T	F	F	P	3	
284234800	OA90-7760	CBI144349	T	F	T	T	F	F	T	F	F	P	3	
284234800	OA90-8258	CBI752122	T	F	T	T	F	F	T	F	F	P	3	
284234800	RAD02401	Spray Starch	T	F	T	T	F	F	T	F	F	P	3	
284234800	RAD02402	Spray Starch	T	F	T	T	F	F	T	F	F	P	3	
284234800	RAD02403	Spray Starch	T	F	T	T	F	F	T	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284234800	RAD02501	Fabric Finish	T	F	T	T	F	F	T	F	F	P	3	
284234900	IA000019	K2R Spot Lifter (aerosol)	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000020	Remove Fabric Cleaner	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000022	Afta Cleaning Fluid	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000023	Energine Spot Fluid	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000024	Energine Cleaning Fluid	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000025	Carbona #10 Spot Remover	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000026	K2R Spot Lifter (paste)	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000388	Dry Clean Spot Remover	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000389	E Z Spot Remover	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000540	Thoro Spot Remover	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000542	Kleenol Spot Remover	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000684	Brush Top Spot Remover	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000835	One Step Spot Lifter	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000836	Energine Spot Remover	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA000991	Dyo Spot Remover	T	T	T	T	T	T	T	F	F	P	3	
284234900	IA001153	Stanley Spot Remover	T	T	T	T	T	T	T	F	F	P	3	
284234900	N0113055	dry cleaning solutions	T	T	T	T	T	T	T	F	F	P	3	
284234900	N0113056	dry cleaning compound	T	T	T	T	T	T	T	F	F	P	3	
284234900	N0113057	dry cleaning fluid	T	T	T	T	T	T	T	F	F	P	3	
284234900	N0113058	dry cleaning formula	T	T	T	T	T	T	T	F	F	P	3	
284234900	N0113059	dry cleaning formula	T	T	T	T	T	T	T	F	F	P	3	
284234900	N0113106	spotting liquid for dry cleaning	T	T	T	T	T	T	T	F	F	P	3	
284234900	N0113107	spot cleaner	T	T	T	T	T	T	T	F	F	P	3	
284234900	N0113108	spot cleaner	T	T	T	T	T	T	T	F	F	P	3	
284234900	N0113125	dry cleaning solutions	T	T	T	T	T	T	T	F	F	P	3	
284234900	OA90-10289	CBI899861	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-10293	CBI535051	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-10310	CBI532548	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-10800	CBI683647	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-11154	CBI977054	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-11374	CBI728292	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-11880	CBI668229	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-12293	CBI22985	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-12874	CBI607839	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-13244	CBI835916	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-13271	CBI124759	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-15077	CBI284627	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-15420	CBI876842	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-16085	CBI284531	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-17231	CBI922045	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-17250	CBI696767	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-17262	CBI414126	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-17268	CBI233470	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-17279	CBI735985	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-17543	CBI541242	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-18494	CBI949127	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-18517	CBI979976	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-19311	CBI765189	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-19342	CBI65696	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-19347	CBI696213	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-19349	CBI981152	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-19908	CBI231672	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-20743	CBI390860	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-21046	CBI64157	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-21146	CBI269451	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-21200	CBI805333	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-21829	CBI717808	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-21846	CBI804494	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-22287	CBI850273	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-23183	CBI382598	T	F	T	T	F	F	T	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284234900	OA90-2348	CBI4339	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-23652	CBI164657	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-24261	CBI381112	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-24866	CBI739183	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-25245	CBI517838	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-25566	CBI707951	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-25614	CBI713232	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-2564	CBI431626	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-2723	CBI131211	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-2725	CBI51011	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-2735	CBI242258	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-27523	CBI354498	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-27527	CBI961591	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-2857	CBI768800	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-29871	CBI320079	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-30052	CBI713935	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-30349	CBI809014	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-30978	CBI335284	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-31816	CBI733206	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-31862	CBI393059	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-32142	CBI592916	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-32146	CBI943540	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-32220	CBI730043	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-32392	CBI652174	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-32395	CBI212727	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-32399	CBI996252	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-32402	CBI997647	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-3254	CBI30433	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-3260	CBI202207	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-32641	CBI793806	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-32757	CBI544381	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-32759	CBI376718	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-32831	CBI465446	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-33525	CBI212558	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-35844	CBI410621	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-35848	CBI588255	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-37425	CBI926497	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-37942	CBI813387	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-38527	CBI702266	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-38697	CBI917510	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-38699	CBI708806	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-38704	CBI433535	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-38732	CBI268976	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-38887	CBI562827	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-39249	CBI64221	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-39424	CBI580857	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-39433	CBI917554	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-4239	CBI211822	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-42622	CBI983635	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-43173	CBI189247	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-43278	CBI550390	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-43334	CBI555191	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-445	CBI400963	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-4872	CBI65515	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-4960	CBI585567	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-573	CBI226204	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-578	CBI435753	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-580	CBI396095	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-589	CBI572857	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-6450	CBI840984	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-665	CBI26683	T	F	T	T	F	F	T	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284234900	OA90-695	CBI309524	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-7348	CBI734300	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-7712	CBI925508	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-7719	CBI228922	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-8174	CBI593656	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-8374	CBI635093	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-8397	CBI639642	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-8407	CBI841962	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-8421	CBI337045	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-8607	CBI305925	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-8611	CBI34563	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-9166	CBI923276	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-9199	CBI772019	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-929	CBI704868	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-9339	CBI620769	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-935	CBI96339	T	F	T	T	F	F	T	F	F	P	3	
284234900	OA90-9893	CBI278813	T	F	T	T	F	F	T	F	F	P	3	
284234900	RAD02801	Pre-Laundry Cleaner	T	F	T	T	F	F	T	F	F	P	3	
284235000	OA90-1009	CBI90702	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-10393	CBI11966	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-10397	CBI41696	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-10424	CBI971259	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-10443	CBI267173	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-10455	CBI879535	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-11492	CBI520015	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-11852	CBI885248	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-11856	CBI251007	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-12228	CBI449614	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-12232	CBI447923	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-13668	CBI306933	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-14567	CBI265588	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-15070	CBI479386	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-15586	CBI770065	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-15611	CBI694739	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-16088	CBI350498	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-17220	CBI28065	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-17270	CBI388862	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-17282	CBI137356	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-17471	CBI459058	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-17509	CBI170426	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-17880	CBI217394	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-18762	CBI834769	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-18776	CBI799675	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-18836	CBI408158	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-19297	CBI742374	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-19496	CBI313892	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-19974	CBI986079	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-20481	CBI997156	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-21097	CBI226569	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-21105	CBI841601	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-21576	CBI390890	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-21836	CBI734441	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-21838	CBI329647	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-22658	CBI276842	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-23087	CBI843050	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-23607	CBI836253	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-23712	CBI245723	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-24160	CBI563851	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-24310	CBI973008	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-24520	CBI726099	T	T	T	T	T	T	T	F	F	P	3	
284235000	OA90-24735	CBI171542	T	T	T	T	T	T	T	F	F	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284235000	OA90-24744	CBI956558	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-24810	CBI108682	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-25694	CBI979686	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-2704	CBI78988	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-27477	CBI17962	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-27505	CBI189786	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-27506	CBI973676	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-27508	CBI634913	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-28750	CBI319102	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-28752	CBI402073	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-30430	CBI782767	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-30986	CBI421615	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-31105	CBI299207	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-31722	CBI258801	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-31865	CBI657175	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-3229	CBI768208	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-32384	CBI122107	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-32386	CBI282008	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-32390	CBI183575	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-32397	CBI899407	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-32404	CBI712252	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-32560	CBI549813	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-3268	CBI698370	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-32894	CBI648704	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-33599	CBI884823	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-33959	CBI85105	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-35286	CBI116001	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-35720	CBI130372	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-35870	CBI718188	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-37354	CBI199397	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-37498	CBI332987	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-38246	CBI864613	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-38825	CBI29482	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-38987	CBI260683	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-39253	CBI996132	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-39268	CBI566034	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-39428	CBI266847	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-3955	CBI791613	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-3971	CBI483355	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-4215	CBI890586	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-422	CBI691139	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-42207	CBI844025	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-42839	CBI208033	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-4343	CBI780896	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-449	CBI768567	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-460	CBI807528	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-474	CBI61229	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-482	CBI594221	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-5588	CBI7270	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-559	CBI199144	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-631	CBI448914	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-6430	CBI598307	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-6962	CBI82590	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-7093	CBI351620	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-7401	CBI429399	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-7496	CBI423499	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-7565	CBI107551	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-7567	CBI845736	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-7657	CBI201506	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-7726	CBI372098	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-7756	CBI498450	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284235000	OA90-8026	CBI723855	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-808	CBI495950	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-8371	CBI573585	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-8385	CBI411061	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-8389	CBI516953	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-8402	CBI478354	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-8468	CBI219757	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-854	CBI867160	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-889	CBI24287	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-9179	CBI189138	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-9357	CBI946798	T	T	T	T	T	T	T	T	F	P	3	
284235000	OA90-9878	CBI815033	T	T	T	T	T	T	T	T	F	P	3	
284235100	N0110001	antistatic carpet shampoo (part b)	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110003	carpet cleaner	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110004	carpet cleaner - foam type	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110005	carpet cleaner - scrub type	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110006	carpet extraction cleaner	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110007	carpet extractor cleaner	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110008	carpet steam cleaner	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110009	carpet shampoo (part a)	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110010	carpet shampoo (part b)	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110019	liquid spray vacuum carpet cleaner	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110020	powdered spray vacuum carpet cleaner	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110021	prem-meddy-steam extraction carpet cle	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110022	prem-hvydyt-steam extract carpclea-but	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110023	heavy duty steam extract carpet cleaner	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110024	rug cleaner	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110025	rug cleaner	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110026	rug cleaner	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110029	basic rug shampoo concentrate	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110030	rug & upholstery shampoo - low foam liq	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110031	rug & upholstery shampoo - high foam li	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110032	rug shampoo	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110033	rug shampoo	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110034	rug shampoo - liquid type	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110035	rug steam cleaner	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110036	rug steam cleaner - nonphosphate powder	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110037	rug steam cleaner - powder w/ phosphate	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110038	rug&upholst cleaner-dry brittle liq-hig	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110039	rug&upholst cleaner-dry brittle liq-goo	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110040	rug&upholst cleaner-dry brittle liq-eco	T	F	F	F	F	F	F	F	F	P	3	
284235100	N0110041	liq steam cleaner - carpets - hard wate	T	F	F	F	F	F	F	F	F	P	3	
284235100	OA90-1219	CBI753924	T	T	T	T	T	T	T	T	T	P	3	
284235100	OA90-13378	CBI327849	T	T	T	T	T	T	T	T	T	P	3	
284235100	OA90-1423	CBI989882	T	T	T	T	T	T	T	T	T	P	3	
284235100	OA90-27851	CBI328848	T	T	T	T	T	T	T	T	T	P	3	
284235100	OA90-29158	CBI414319	T	T	T	T	T	T	T	T	T	P	3	
284235100	OA90-29160	CBI472692	T	T	T	T	T	T	T	T	T	P	3	
284235100	OA90-29705	CBI565942	T	T	T	T	T	T	T	T	T	P	3	
284235100	OA90-31167	CBI109029	T	T	T	T	T	T	T	T	T	P	3	
284235100	OA90-42509	CBI987797	T	T	T	T	T	T	T	T	T	P	3	
284235100	OA90-428	CBI221557	T	T	T	T	T	T	T	T	T	P	3	
284235100	OA90-4929	CBI240745	T	T	T	T	T	T	T	T	T	P	3	
284235100	OA90-5258	CBI747536	T	T	T	T	T	T	T	T	T	P	3	
284235300	N0110011	carpet shampoo, aeerosol	F	T	T	T	T	T	T	T	F	P	3	
284235300	N0110012	carpet shampoo, scrubbing machine	F	T	T	T	T	T	T	T	F	P	3	
284235300	N0110013	carpet shampoo, scrubbing machine	F	T	T	T	T	T	T	T	F	P	3	
284235300	N0110014	carpet shampoo, steam cleaner	F	T	T	T	T	T	T	T	F	P	3	
284235300	N0110015	carpet shampoo, steam cleaning	F	T	T	T	T	T	T	T	F	P	3	
284235300	N0110016	carpet shampoo, steam extractor	F	T	T	T	T	T	T	T	F	P	3	
284235300	N0110017	carpet shampoo-soil retard&antistat-pum	F	T	T	T	T	T	T	T	F	P	3	



Appendix B  
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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284235300	N0110018	carpet shampoo-soil retard&antistat-aer	F	T	T	T	T	T	T	T	F	P	3	
284235300	N0110027	aerosol rug shampoo with anticorrosive	F	T	T	T	T	T	T	T	F	P	3	
284235300	N0110028	rug shampoo with polymer	F	T	T	T	T	T	T	T	F	P	3	
284235300	RAD02901	Rug and carpet spray cleaner	F	T	T	T	T	T	T	T	F	P	3	
284238100	IA001303	Air freshener, water-based spray	T	T	T	T	T	T	T	T	T	P	1	
284238100	IA001304	Air freshener, dry spray	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-1039	CBI951558	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-10808	CBI210369	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-11111	CBI760799	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-13453	CBI182975	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-14436	CBI421659	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-16689	CBI968391	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-17494	CBI243985	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-17528	CBI779272	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-17532	CBI580971	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-17536	CBI77608	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-2135	CBI34839	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-24688	CBI713789	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-24994	CBI452559	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-25643	CBI468764	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-2637	CBI442791	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-2691	CBI739868	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-2717	CBI122120	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-27429	CBI81042	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-27448	CBI896467	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-27487	CBI286397	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-2751	CBI739990	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-2753	CBI997402	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-30000	CBI566963	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-30014	CBI657960	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-30037	CBI804450	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-30214	CBI310049	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-31517	CBI156649	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-31784	CBI443867	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-32737	CBI936021	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-32820	CBI89963	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-33040	CBI95765	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-33509	CBI798767	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-33532	CBI776663	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-33729	CBI579010	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-34239	CBI501797	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-35716	CBI54263	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-35993	CBI913567	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-36872	CBI791632	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-36882	CBI323284	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-37684	CBI590776	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-37878	CBI518221	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-38676	CBI743008	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-38708	CBI24526.	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-3895	CBI183431	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-3898	CBI410438	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-3912	CBI53645	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-3920	CBI96334	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-42386	CBI466555	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-4270	CBI771708	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-4274	CBI216419	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-42953	CBI641319	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-42994	CBI81112	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-43001	CBI12998	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-43008	CBI694203	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-43017	CBI598420	T	T	T	T	T	T	T	T	T	P	1	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284238100	OA90-43377	CBI123042	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-43379	CBI200307	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-4882	CBI991054	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-4920	CBI222311	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-4926	CBI763334	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-6988	CBI3482	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7018	CBI999557	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7124	CBI856608	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7145	CBI120184	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7150	CBI860939	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7155	CBI175487	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7184	CBI197313	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7224	CBI19465	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7234	CBI414729	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7318	CBI790005	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7326	CBI505263	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7345	CBI916185	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7410	CBI463214	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7533	CBI895010	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7594	CBI315213	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-7798	CBI829017	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-8028	CBI820724	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-8078	CBI179861	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-8159	CBI813646	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-8169	CBI285803	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-8222	CBI307089	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-8236	CBI234147	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-8393	CBI962944	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-8545	CBI689192	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-9139	CBI260651	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-9413	CBI991393	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-9560	CBI69393	T	T	T	T	T	T	T	T	T	P	1	
284238100	OA90-9658	CBI322912	T	T	T	T	T	T	T	T	T	P	1	
284238500	IA001300	Air freshener, liquid	T	T	T	T	T	T	T	T	T	P	1	
284238500	IA001301	Air freshener, solid gel	T	T	T	T	T	T	T	T	T	P	1	
284238500	IA001302	Air freshener, blotter type	T	T	T	T	T	T	T	T	T	P	1	
284238500	OA90-10049	CBI947361	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-10053	CBI585537	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-10060	CBI807859	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-10108	CBI747070	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-11874	CBI773361	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-12274	CBI701219	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-12832	CBI902746	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-12834	CBI914059	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-14046	CBI698191	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-14089	CBI639343	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-14376	CBI526953	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-14395	CBI497400	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-14576	CBI434147	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-14712	CBI64704	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-1482	CBI991566	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-1492	CBI585010	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-1497	CBI19540.	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-1510	CBI63587	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-15606	CBI734166	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-17224	CBI187278	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-17455	CBI719305	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-17457	CBI893816	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-17873	CBI379456	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-17941	CBI537097	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-17959	CBI52965	T	T	T	T	T	T	T	T	F	P	1	

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PRODUCT_ID	FORMULATN	DESC	ENV11	ENV12	ENV13	ENV14	ENV15	ENV16	ENV17	ENV18	ENV19	MAT_PROD	CASE	SUBCASE
284238500	OA90-18013	CBI600810	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-18035	CBI261922	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-18070	CBI74240	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-18107	CBI999424	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-18476	CBI57259	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-18480	CBI670358	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-18504	CBI30494	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-18509	CBI53324	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-19336	CBI714115	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-19506	CBI773743	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-20029	CBI308482	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-20052	CBI49169	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-20054	CBI31464	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-20243	CBI740759	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-20275	CBI454782	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-21598	CBI717892	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-21659	CBI189846	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-21699	CBI204806	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-21840	CBI394131	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-21997	CBI90393	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-22636	CBI24445	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-23625	CBI422940	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-23660	CBI835818	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-23668	CBI412622	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-23708	CBI553985	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-23798	CBI645651	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-23939	CBI781842	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-23963	CBI686286	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-23971	CBI71427	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-24267	CBI24317.	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-24271	CBI602776	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-24274	CBI807477	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-24699	CBI239099	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-24854	CBI26657	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-24856	CBI189717	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-24949	CBI401694	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-25168	CBI894201	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-25441	CBI360319	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-25556	CBI484385	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-2569	CBI63253	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-26283	CBI21465	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-27496	CBI789116	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-27521	CBI767911	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-27603	CBI740563	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-27604	CBI205920	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-2844	CBI74225	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-28741	CBI51027	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-28807	CBI462553	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-28816	CBI903624	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-28874	CBI247916	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-29085	CBI535925	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-29344	CBI927444	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-29611	CBI72255.	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-29635	CBI27090	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-29744	CBI223272	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-2986	CBI693589	F	F	F	F	F	F	F	F	T	P	1	
284238500	OA90-29932	CBI36112	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-2997	CBI130039	F	F	F	F	F	F	F	F	T	P	1	
284238500	OA90-29972	CBI940274	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-30343	CBI304627	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-30384	CBI719624	T	T	T	T	T	T	T	T	F	P	1	

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PRODUCT_ID	FORMULATN	DESC	ENV11	ENV12	ENV13	ENV14	ENV15	ENV16	ENV17	ENV18	ENV19	MAT_PROD	CASE	SUBCASE
284238500	OA90-3041	CBI676127	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-3051	CBI162730	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-3053	CBI672589	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-31694	CBI579884	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-31960	CBI978015	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-3243	CBI608718	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-32789	CBI102996	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-33750	CBI74584	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-33935	CBI680854	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-34112	CBI996847	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-34115	CBI264060	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-34139	CBI795815	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-35573	CBI363319	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-35723	CBI237588	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-36003	CBI739632	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-36877	CBI675762	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-36885	CBI277491	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-37410	CBI404637	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-37679	CBI519074	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-37836	CBI619679	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-38118	CBI41847	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-38349	CBI264126	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-3908	CBI694401	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-3916	CBI555549	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-3924	CBI728547	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-39266	CBI451906	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-3928	CBI40798	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-39396	CBI982666	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-41060	CBI54074	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-41121	CBI129301	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-41326	CBI599859	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-4221	CBI156436	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-42619	CBI611870	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-42833	CBI550798	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-42950	CBI868910	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-43026	CBI120012	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-43030	CBI617321	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-43273	CBI951414	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-43693	CBI138294	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-5444	CBI228495	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-5561	CBI765003	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-5576	CBI357705	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-5580	CBI505022	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-5584	CBI343285	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-5593	CBI164691	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-601	CBI606473	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-612	CBI898959	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-6428	CBI423555	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-7012	CBI494643	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-7055	CBI121007	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-7143	CBI244291	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-7159	CBI126299	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-7187	CBI247018	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-7212	CBI87667	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-7232	CBI126486	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-7494	CBI72152	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-7650	CBI322617	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-777	CBI162175	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-817	CBI981011	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-9395	CBI351264	T	T	T	T	T	T	T	T	F	P	1	
284238500	OA90-9874	CBI549430	T	T	T	T	T	T	T	T	F	P	1	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE	
284238500	OA90-9948	CBI714317	T	T	T	T	T	T	T	T	F	P	1		
284238500	RAD03001	Air Freshener Spray	T	T	T	T	T	T	T	T	T	P	1		
284238500	RAD03002	Air Freshener Spray	T	T	T	T	T	T	T	T	T	P	1		
284238500	RAD03003	Air Freshener Spray	T	T	T	T	T	T	T	T	T	P	1		
284239700	IA000027	X-14 Mildew Stain Remover	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	IA000121	Gumout Steam Cleaner	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000123	Gunk Engine Brite	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000125	STP Heavy Duty Degreaser	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000129	Gunk Motor Flush	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000131	Flex-O-Glaze Polish	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	IA000132	Stainless Steel Magic	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	IA000134	CRC Lectra-Motive	T	F	F	F	T	F	F	F	F	P	3	2	
284239700	IA000135	Marble Magic	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	IA000136	Megular's Rawhide	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	IA000137	CRC Electronic Cleaner	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000138	Electro Contact Cleaner	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000139	Fiberglass Magic	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	IA000288	Gunk General Degreaser	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000289	Gunk Home/Auto Cleaner	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000290	1,1,1-Trichloroethane	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000291	The Unstuffers (degreaser)	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000292	Amway MultiPurpose L.O.C.	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000345	Murray Oil Spray	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000355	Archer Cleaner Degreaser	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000361	Realistic Non-Slip	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	IA000365	Allsop3 Cleaning Solution	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000369	Stripper Flux Remover	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000402	No 7 Engine Cleaner	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000403	Instant Motor Bath	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000404	Cleaner & Degreaser	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000405	Electric Motor Cleaner	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	IA000497	Energine Cleaning Fluid	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000509	Lektro Shaver Saver	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	IA000510	Parks Shave Ease	T	T	T	T	F	F	T	F	F	P	3	2	
284239700	IA000511	Shaver Cleaning Spray	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	IA000517	All Purpose Cleaner	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	IA000524	Head Cleaner HC-3 VCR	T	T	F	F	T	F	F	F	F	P	3	2	
284239700	IA000526	Video Magic Head Cleaner	T	T	F	F	T	F	F	F	F	P	3	2	
284239700	IA000527	Memorex X HC (VCR cleaner)	T	T	F	F	T	F	F	F	F	P	3	2	
284239700	IA000528	Head Savers VCR Cleaner	T	T	F	F	T	F	F	F	F	P	3	2	
284239700	IA000550	Gumout Xtra Duty	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000551	B 33 Engine Cleaner	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000553	Foaming Engine Degreaser	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000554	Electric Motor Cleaner	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000656	Gunk Degreaser	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000657	Gila Film Guard	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	IA000664	Peacock All-Purpose Cleaner	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000670	Video Head Tape Cleaner	T	T	F	F	T	F	F	F	F	P	3	2	
284239700	IA000671	CRT Screen Cleaner	T	T	F	F	T	F	F	F	F	P	3	2	
284239700	IA000674	Gen Purpose Adhesive Remover	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000675	EZ AZ 123 (adhesive remover)	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000676	Old Hrd Adhesive Remover	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000694	Surefire Degreaser	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000695	Electro Contact Cleaner	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	IA000801	Berryman Chemtool B12	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000802	Trans X (engine cleaner)	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000804	T F 500 Repair Kit (engine cleaner)	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	IA000805	LPS Instant Degreaser	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000806	Kel All Purpose Cleaner	T	T	T	T	T	T	T	T	T	P	3	2	
284239700	IA000807	Norelco Razor Lubricant	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	IA000808	Nagaoka CD Spray	T	T	T	T	T	T	T	T	F	P	3	2	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284239700	IA000811	Memorex Record Care Kit	T	T	T	T	T	F	T	T	F	P	3	2
284239700	IA000813	Realistic Non Slip	T	T	T	T	T	T	T	T	F	P	3	2
284239700	IA000816	Beta Video Head Cleaner	T	T	F	F	T	F	F	F	F	P	3	2
284239700	IA000817	SSK Video Head Cleaner	T	T	F	F	T	F	F	F	F	P	3	2
284239700	IA000818	Archer TV Cl/Lube	T	T	T	T	T	T	T	T	F	P	3	2
284239700	IA000950	M 1 Remover (gen'l cleaner)	T	T	T	T	T	T	T	T	T	P	3	2
284239700	IA000951	Carbo Chlor All Purpose Cleaner	F	F	F	F	F	F	F	F	F	P	3	2
284239700	IA000952	Gila Spray Film	T	T	T	T	T	T	T	T	T	P	3	2
284239700	IA000961	Gunk Trans Fusion	F	F	F	F	F	F	F	F	F	P	3	2
284239700	IA000963	Garage Magic Clean/Degreaser	T	T	T	T	T	T	T	T	T	P	3	2
284239700	IA000964	Gunk Cleaner Clean/Degreaser	F	F	F	F	F	F	F	F	F	P	3	2
284239700	IA000965	Shaver Sharp Elec Shaver	T	F	T	T	F	F	T	F	F	P	3	2
284239700	IA000972	GC Tape Head Care Cleaner	T	T	F	F	T	F	F	F	F	P	3	2
284239700	IA000973	GC Tape Rec Head Lube	T	T	F	F	T	F	F	F	F	P	3	2
284239700	IA000975	Protek Head Lubricant	T	T	T	T	T	T	T	T	F	P	3	2
284239700	IA000979	Soakoff Wallpaper Remover	T	T	T	T	T	T	T	T	F	P	3	2
284239700	IA000980	Paste Away Remover	T	T	T	T	T	T	T	T	T	P	3	2
284239700	IA000981	Tile Pro Soft Off Adhesive	T	T	T	T	T	T	T	T	T	P	3	2
284239700	IA000998	Jet Aer Eng Cl/Degreaser	F	F	F	F	F	F	F	F	F	P	3	2
284239700	IA000999	Engine Scour	F	F	F	F	F	F	F	F	F	P	3	2
284239700	IA001000	Co Contact Cleaner	T	T	T	T	T	T	T	T	F	P	3	2
284239700	IA001109	Gunk G P Degreaser	F	F	F	F	F	F	F	F	F	P	3	2
284239700	IA001130	Trans X (engine cleaner)	F	F	F	F	F	F	F	F	F	P	3	2
284239700	IA001131	Garage Magic	T	T	T	T	T	T	T	T	F	P	3	2
284239700	IA001134	USA Elec Shaver Lube	T	F	T	T	F	F	T	F	F	P	3	2
284239700	IA001135	Q-10 Head Lube/Cleaner	F	F	F	F	F	F	F	F	F	P	3	2
284239700	IA001137	Duotone Record Cleaner	T	T	F	F	T	F	F	F	F	P	3	2
284239700	IA001143	TEAC Rubber Cl/Cond RC 3	T	T	T	T	T	T	T	T	F	P	3	2
284239700	IA001145	Zykkor VCR Head Cleaner	T	T	F	T	F	F	F	F	F	P	3	2
284239700	IA001146	Pfantone VCR Head Cleaner	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0111050	wall cleaner	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0111051	wall cleaner - light duty	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0111052	wall cleaner - spray	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0113024	chain lubricant	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0113036	degreaser conc - prem qual - hard water	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113037	degreaser conc-premqual - med-hard wate	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113038	degreaser concentrate - high quality	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113039	degreaser conc - high pressure spray sy	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113040	solv degreasers,flush off type-highqual	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113041	solv degreasers,flush off type-highqual	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113042	powder degreasers-caustic, non-phosphat	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113043	powder degreasers, non-caustic,phosphat	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113044	degreaser	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113045	spray degreaser	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113046	heavy duty spray degreaser	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113047	high foam degreaser	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113048	non-butyl degreaser	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113049	non-phosphate non-butyl degreaser	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113050	industrial strength non-butyl degreaser	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113051	water based solvent degreaser	F	F	F	F	F	F	F	F	F	P	3	2
284239700	N0113061	foaming butyl cleaner	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0113062	foam marker concentrates high viscosity	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0113063	foam marker concentrates low viscosity	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0113065	gel rust remover	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0113066	graffiti remover	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0113067	graffiti remover	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0113072	heavy duty cleaner & degreaser	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0113088	liquid rust remover	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0113091	lipstick stain remover	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0113092	leather, vinyl, plastic cleaner	T	T	T	T	T	T	T	T	F	P	3	2
284239700	N0113093	leather cleaner	T	T	T	T	T	T	T	T	F	P	3	2

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE	
284239700	N0113094	medium duty steam cleaner	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113095	oil field apparatus cleaner	F	F	F	F	F	F	F	F	F	P	3	2	
284239700	N0113096	medium duty non-caustic steam cleaner	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113098	produce peeling formula	T	T	T	T	F	F	T	T	F	P	3	2	
284239700	N0113099	porcelain cleaner	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113102	rust remover - liquid - acid	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113103	rust remover - liquid - alkaline	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113110	steam cleaner, liquid	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113111	steam cleaner, powder - phosphate-free	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113112	steam cleaning compound	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113113	steam cleaner	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113114	steam cleaner	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113115	steam cleaners - steam/spray	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113116	steam cleaners - powder	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113117	steam cleaners - non-phosphate conc.	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113118	steam cleaning compounds	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113119	steam cleaning compounds	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113120	steam cleaning compounds	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113121	steam cleaning compounds	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0113126	graffiti remover	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	N0116001	acidic cleaner for aluminum trucks	F	F	F	F	F	F	F	F	F	P	3	2	
284239700	N0116008	exterior railcar cleaner	F	F	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-1145	CBI871679	T	F	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-11467	CBI218621	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	OA90-1157	CBI930789	T	F	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-1163	CBI721029	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-12836	CBI204450	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-12885	CBI467700	T	F	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-13254	CBI999841	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	OA90-13257	CBI976243	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	OA90-13259	CBI791302	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	OA90-13400	CBI270473	T	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-1357	CBI124486	T	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-1360	CBI105216	F	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-13725	CBI165453	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	OA90-1377	CBI818290	T	F	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-1412	CBI389974	T	F	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-14332	CBI475019	T	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-14336	CBI580193	T	F	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-14518	CBI592598	T	F	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-14527	CBI424033	T	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-14531	CBI302050	T	F	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-14535	CBI30423.	T	F	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-14537	CBI471707	T	T	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-14541	CBI376490	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	OA90-14544	CBI735635	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	OA90-14546	CBI984125	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	OA90-14550	CBI632420	T	T	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-14553	CBI125404	T	F	F	F	F	T	F	F	F	P	3	2	
284239700	OA90-14569	CBI272088	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	OA90-15309	CBI399218	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	OA90-15513	CBI140765	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	OA90-15631	CBI390384	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	OA90-15841	CBI712077	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	OA90-16127	CBI469698	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	OA90-16166	CBI519144	T	T	T	T	T	T	T	T	F	P	3	2	
284239700	OA90-16356	CBI42431	T	F	F	F	F	F	F	F	F	P	3	2	
284239700	OA90-17217	CBI259106	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	OA90-17235	CBI701028	T	F	T	T	F	F	T	F	F	P	3	2	
284239700	OA90-17477	CBI852545	F	T	F	F	T	F	F	F	F	P	3	2	
284239700	OA90-17479	CBI825649	F	T	F	F	T	F	F	F	F	P	3	2	

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284239700	OA90-17511	CBI494287	T	F	T	T	F	F	T	F	F	P	3	2
284239700	OA90-17796	CBI691424	T	T	T	T	T	T	T	F	F	P	3	2
284239700	OA90-18028	CBI796491	T	T	T	T	T	T	T	F	F	P	3	2
284239700	OA90-18054	CBI60468	T	T	T	T	T	T	T	F	F	P	3	2
284239700	OA90-18236	CBI530090	T	T	T	T	T	T	T	F	F	P	3	2
284239700	OA90-18684	CBI378028	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-18810	CBI114153	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-18969	CBI491108	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-19125	CBI572756	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-19295	CBI855630	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-19415	CBI295423	F	T	T	T	T	T	T	F	F	P	3	2
284239700	OA90-19499	CBI279067	T	T	T	T	F	F	T	T	F	P	3	2
284239700	OA90-19539	CBI310604	T	T	T	T	T	T	T	F	F	P	3	2
284239700	OA90-19547	CBI682985	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-19552	CBI650766	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-19578	CBI274222	T	T	T	T	T	T	T	F	F	P	3	2
284239700	OA90-20144	CBI602632	T	T	T	T	T	T	T	F	F	P	3	2
284239700	OA90-20867	CBI88833	T	T	T	T	T	T	T	F	F	P	3	2
284239700	OA90-21601	CBI130491	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-21968	CBI356366	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-22048	CBI23431	T	T	T	T	T	T	T	T	T	P	3	2
284239700	OA90-22268	CBI60261	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-22299	CBI461015	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-22306	CBI390015	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-22318	CBI247516	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-22322	CBI122364	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-23616	CBI71151	T	F	T	T	F	F	T	F	F	P	3	2
284239700	OA90-23775	CBI161244	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-24256	CBI535275	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-24317	CBI213184	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-24678	CBI58297	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-24692	CBI12166	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-24694	CBI220980	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-24697	CBI55401	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-24890	CBI179485	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-24939	CBI262954	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-24945	CBI12724	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-25259	CBI135147	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-25275	CBI571687	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-25685	CBI27930	T	F	T	T	F	F	T	F	F	P	3	2
284239700	OA90-25688	CBI856356	T	F	T	T	F	F	T	F	F	P	3	2
284239700	OA90-26031	CBI352229	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-26042	CBI765952	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-26066	CBI556051	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-26070	CBI71982	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-2708	CBI366965	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-2713	CBI673555	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-27400	CBI381845	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-27401	CBI782674	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-27402	CBI519129	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-27403	CBI369137	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-27404	CBI135269	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-27405	CBI29251	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-27406	CBI914183	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-27410	CBI54582	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-27419	CBI557084	T	T	F	F	F	F	F	F	F	P	3	2
284239700	OA90-27420	CBI90246	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-27424	CBI94851	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-27428	CBI855143	T	T	F	F	F	F	F	F	F	P	3	2
284239700	OA90-27445	CBI106473	T	T	T	T	T	T	T	T	T	P	3	2
284239700	OA90-27451	CBI130461	T	T	T	T	T	T	T	T	T	P	3	2



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284239700	OA90-27843	CBI385718	F	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-28413	CBI845489	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-28429	CBI222025	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-28592	CBI738090	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-28609	CBI786842	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-2953	CBI297731	T	F	F	F	F	F	T	F	F	P	3	2
284239700	OA90-29557	CBI156204	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-29581	CBI24714	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-29681	CBI662034	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-29697	CBI834906	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-29701	CBI484336	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-29709	CBI737419	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-29761	CBI177701	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-29782	CBI993993	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-30103	CBI902391	T	F	T	T	F	F	T	F	F	P	3	2
284239700	OA90-30115	CBI795777	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-30197	CBI83383	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-30202	CBI698989	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-3029	CBI559904	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-30911	CBI189541	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-30913	CBI131322	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-31160	CBI160663	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-31165	CBI334774	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-31170	CBI594288	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-31174	CBI782427	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-31795	CBI139825	F	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-32008	CBI331699	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-32011	CBI44070	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-32035	CBI765301	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-32053	CBI325174	F	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-32057	CBI393533	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-32061	CBI5335.	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-32762	CBI991632	T	F	T	T	F	F	T	F	F	P	3	2
284239700	OA90-33018	CBI216289	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-33032	CBI379966	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-33034	CBI63490	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-33052	CBI867338	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-33057	CBI397964	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-33193	CBI674645	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-33583	CBI530821	T	T	T	T	F	F	T	F	F	P	3	2
284239700	OA90-33925	CBI298315	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-33929	CBI641348	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-34010	CBI292142	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-34046	CBI556982	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-34146	CBI760612	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-35265	CBI474535	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-35294	CBI358643	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-35447	CBI468557	T	F	T	T	F	F	T	F	F	P	3	2
284239700	OA90-35726	CBI944199	T	F	T	T	F	F	T	F	F	P	3	2
284239700	OA90-35986	CBI674493	F	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-36583	CBI21359	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-38365	CBI663829	T	T	T	T	T	T	T	T	F	P	3	2
284239700	OA90-38476	CBI510908	T	T	T	T	F	F	T	T	F	P	3	2
284239700	OA90-38688	CBI147310	T	T	T	T	F	F	F	T	F	P	3	2
284239700	OA90-3877	CBI234669	T	T	T	T	F	F	T	T	F	P	3	2
284239700	OA90-38785	CBI790264	T	F	F	F	F	F	F	F	F	P	3	2
284239700	OA90-39225	CBI10493	T	F	T	T	F	F	T	F	F	P	3	2
284239700	OA90-39255	CBI966857	T	F	T	T	F	F	T	F	F	P	3	2
284239700	OA90-39261	CBI475675	T	F	T	T	F	F	T	F	F	P	3	2
284239700	OA90-39273	CBI56218	T	F	T	T	F	F	T	F	F	P	3	2
284239700	OA90-404	CBI509188	T	F	F	F	F	F	F	F	F	P	3	2

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284239700	OA90-41023	CBI401944	T	T	T	T	F	F	T	T	F	P	3	2
284239700	OA90-41669	CBI882947	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-41812	CBI800753	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-41825	CBI972309	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-41828	CBI690727	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-41859	CBI26104	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-41914	CBI84253	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-41924	CBI74826	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-41929	CBI870283	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-41948	CBI636365	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-41987	CBI304099	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-41997	CBI129773	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-42009	CBI844078	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-42017	CBI413212	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-42389	CBI410424	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-42413	CBI241834	F	F	F	F	F	T	F	F	T	P	3	2
284239700	OA90-42460	CBI896116	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-42511	CBI111842	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-42675	CBI431670	T	T	T	T	T	T	T	T	T	P	3	2
284239700	OA90-42679	CBI486737	T	T	T	T	T	T	T	T	T	P	3	2
284239700	OA90-42682	CBI167005	T	T	T	T	T	T	T	T	T	P	3	2
284239700	OA90-42688	CBI48885	T	T	T	T	T	T	T	T	T	P	3	2
284239700	OA90-42887	CBI535889	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-43155	CBI921446	T	F	T	T	F	F	T	F	T	P	3	2
284239700	OA90-43164	CBI998534	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-43179	CBI669040	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-43184	CBI352405	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-43375	CBI347348	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-43661	CBI393931	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-43698	CBI40018	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-43730	CBI385025	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-43732	CBI673300	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-4956	CBI41365	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-5328	CBI450882	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-5570	CBI948779	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-6518	CBI327454	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-6565	CBI26254.	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-6806	CBI801802	T	F	T	T	F	F	T	F	T	P	3	2
284239700	OA90-7015	CBI252156	T	F	T	T	F	F	T	F	T	P	3	2
284239700	OA90-735	CBI299319	T	F	T	T	F	F	T	F	T	P	3	2
284239700	OA90-7682	CBI294627	T	T	T	T	T	T	T	T	T	P	3	2
284239700	OA90-7765	CBI133019	T	T	T	T	T	T	T	T	T	P	3	2
284239700	OA90-7790	CBI300804	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-7972	CBI14692	T	T	T	T	T	T	T	T	T	P	3	2
284239700	OA90-8014	CBI289623	T	T	T	T	F	F	T	F	T	P	3	2
284239700	OA90-8416	CBI719802	T	F	T	T	F	F	T	F	T	P	3	2
284239700	OA90-8824	CBI16195.	T	T	T	T	T	T	T	T	T	P	3	2
284239700	OA90-885	CBI77314	T	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-891	CBI314022	F	F	F	F	F	F	F	F	T	P	3	2
284239700	OA90-931	CBI383696	T	F	T	T	F	F	T	F	T	P	3	2
284239700	OA90-9941	CBI975446	T	T	T	T	T	T	T	T	T	P	3	2
284239700	OA90-9977	CBI530544	T	F	T	T	F	F	T	F	T	P	3	2
284241100	IA000329	Turtle Wax Chrome Protect	T	F	F	F	F	F	F	F	T	P	3	
284241100	IA000346	Gunk Tar and Bug Remover	T	F	F	F	F	F	F	F	T	P	3	
284241100	IA000347	Megular's Trigger Wash (auto deterg)	T	F	F	F	F	F	F	F	T	P	3	
284241100	IA000370	Snap Silicone Tire Shine	T	F	F	F	F	F	F	F	T	P	3	
284241100	IA000371	Gunk Silicone Tire Shine	T	F	F	F	F	F	F	F	T	P	3	
284241100	IA000529	Sperex Tire Bright	T	F	F	F	F	F	F	F	T	P	3	
284241100	IA000530	Black Tire Paint Cleaner	T	F	F	F	F	F	F	F	T	P	3	
284241100	IA000531	Silicone Tire Shine	T	F	F	F	F	F	F	F	T	P	3	
284241100	IA000672	Espree Wheel Seal	T	F	F	F	F	F	F	F	T	P	3	

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284241100	IA000976	Wheel Kote Tire CXleaner	T	F	F	F	F	F	F	F	F	P	3	
284241100	IA000977	Crager Wheel Care	T	F	F	F	F	F	F	F	F	P	3	
284241100	IA000978	VHT Wheel Seal Tire Clean	T	F	F	F	F	F	F	F	F	P	3	
284241100	IA001148	Classic Tire Shine	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0113104	solvent emulsion, sludge & carbon cleane	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0113105	solvent cleaner	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114001	auto shampoo	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114002	auto shampoo - non-streaking	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114003	automobile foaming spray	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114004	boat wash & car cleaner	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114005	car wash detergent powder	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114006	car wash detergent powders - a	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114007	car wash detergent powders - b	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114008	car wash - liquid	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114009	car wash - liquid a	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114010	car wash - liquid b	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114011	car wash - liquid c	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114012	car wash - liquid d	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114013	car wash, thickened liquid	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114014	liquid car wash	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114015	liquid car wash	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114016	liquid car wash concentrate	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114017	car wash - powdered type	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114018	car wash -liquid type	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114019	car wash-liquid concentrates-high qual	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114020	car wash-liquid concentrates-good qual	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114021	car wash-liquid concentrates-economy	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114022	car wash-liquid concentrates-generic	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114023	car wash powders - premium quality	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114024	car wash powders - good quality	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114025	car wash conc. w/alcohol ethoxylate	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114026	car wash conc. w/alcohol ethoxylate	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114027	medium-cost car wash	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114028	car wash detergent	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114029	hand car wash	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114030	car shampoo - transparent, med viscosit	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114031	car shampoo - acid	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114032	car shampoo - high foaming	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114033	car spray rinse	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114034	car spray rinse	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114035	car spray rinse	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114036	car spray wash	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114037	wand-type car wash	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114038	medium duty truck & rig wash, powder	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114039	heavy duty truck cleaner	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114040	truck wash - liquid type	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114041	truck wash - high pressure spray type	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114042	truck wash (las/hv9/amine oxide)	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114043	liquid truck washes	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114044	liquid truck washes	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114045	truck-car wash - liquid concentrate	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114046	liquid spray cleaner for aluminum truck	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114047	vehicle wash	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0114048	vehicle wash	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0115001	automobile whitewall tire cleaner	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0115002	foamy whitewall tire cleaner, liquid	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0115003	"white lightening" tire cleaner	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0115004	white wall tire bleach	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0115005	white sidewall tire cleaner	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0115006	white-wall tire cleaner	T	F	F	F	F	F	F	F	F	P	3	
284241100	N0115007	white wall tire cleaner	T	F	F	F	F	F	F	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284241100	NO115008	white wall tire cleaner - liquid type	T	F	F	F	F	F	F	F	F	P	3	
284241100	NO116009	powdered hubcap cleaner	T	F	F	F	F	F	F	F	F	P	3	
284241100	NO116011	vinyl top cleaner for automobiles	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-10682	CBI341837	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-10685	CBI813203	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-10702	CBI498632	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-13335	CBI573534	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-13890	CBI798396	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-13924	CBI455020	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14097	CBI170473	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14111	CBI847990	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14155	CBI6331	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14159	CBI102786	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14247	CBI766999	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14325	CBI677163	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14462	CBI570313	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14464	CBI34255.	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14466	CBI98397	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14468	CBI897017	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14470	CBI92689	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14477	CBI102543	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14489	CBI389299	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14491	CBI227811	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14493	CBI160808	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14495	CBI69288	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14497	CBI31300.	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14499	CBI911583	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14507	CBI164371	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14515	CBI897598	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-14525	CBI755866	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-16920	CBI148366	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-1705	CBI137403	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-18021	CBI110405	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-18123	CBI866395	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-187	CBI400002	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-189	CBI921947	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-19419	CBI427347	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-19424	CBI798669	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-19439	CBI995245	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-19456	CBI534188	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-19464	CBI338515	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-19473	CBI2636	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-19489	CBI501595	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-19528	CBI646479	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-19574	CBI386732	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-21788	CBI550370	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-219	CBI128129	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-221	CBI248553	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22125	CBI140946	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22129	CBI836848	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22134	CBI864343	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22139	CBI405949	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22151	CBI779976	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22155	CBI902486	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22158	CBI244706	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22189	CBI369271	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22207	CBI37476	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22221	CBI878132	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22229	CBI268175	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22232	CBI924686	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22241	CBI624000	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284241100	OA90-22262	CBI475496	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22265	CBI367586	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22271	CBI826813	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22275	CBI879836	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22277	CBI156795	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22297	CBI648982	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22303	CBI914779	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-22363	CBI373185	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-231	CBI411617	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-237	CBI238122	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-23756	CBI798480	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-24718	CBI342470	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-24721	CBI252350	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-24738	CBI67492	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-257	CBI344765	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-260	CBI184390	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-26288	CBI741452	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-263	CBI847138	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27620	CBI281472	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27786	CBI943893	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27914	CBI144690	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27916	CBI36136	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27918	CBI741560	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27924	CBI501094	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27926	CBI722905	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27929	CBI713559	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27931	CBI492008	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27936	CBI728647	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27938	CBI889973	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27939	CBI818844	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27945	CBI504615	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27950	CBI677289	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27951	CBI576892	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27967	CBI735513	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27973	CBI233788	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27974	CBI82678	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27975	CBI981589	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27977	CBI804817	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-27981	CBI758045	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-2931	CBI227191	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29518	CBI964888	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29520	CBI621679	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29530	CBI528127	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29533	CBI801892	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29540	CBI878499	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29542	CBI733038	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29547	CBI177274	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29549	CBI166303	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29552	CBI254940	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29554	CBI771323	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29559	CBI74956	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29562	CBI925537	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29564	CBI138341	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29567	CBI448300	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29569	CBI303146	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29571	CBI529109	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29577	CBI531541	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29579	CBI197005	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29585	CBI838262	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29604	CBI236129	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29613	CBI85753	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284241100	OA90-29618	CBI812053	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29627	CBI506216	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29629	CBI638555	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29633	CBI545559	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29637	CBI481772	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29643	CBI521092	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29647	CBI621292	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29649	CBI204934	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29651	CBI572983	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29655	CBI197407	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29657	CBI956927	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29663	CBI76145	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29665	CBI151686	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29673	CBI944960	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29677	CBI532966	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29684	CBI785203	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29686	CBI669033	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29691	CBI215844	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29693	CBI649814	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29699	CBI917223	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29707	CBI505864	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29713	CBI613612	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-2992	CBI71428	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-2995	CBI988036	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-2999	CBI888588	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-29991	CBI250195	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3003	CBI688130	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3006	CBI821377	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3014	CBI165246	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3019	CBI196139	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3021	CBI654554	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3024	CBI645680	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3027	CBI248794	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3034	CBI387925	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3036	CBI342810	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3038	CBI303922	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3089	CBI532137	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3093	CBI588493	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-311	CBI260608	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-31266	CBI685671	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-314	CBI464460	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3250	CBI343385	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-32840	CBI382947	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-32847	CBI725551	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-32850	CBI972122	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-32855	CBI399914	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-32863	CBI655753	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-34128	CBI21707	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-37650	CBI644158	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-37961	CBI944969	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-381	CBI986614	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-385	CBI192198	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-39088	CBI258349	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-3963	CBI561580	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-39810	CBI400188	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-39983	CBI318455	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-39986	CBI384886	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-39989	CBI758099	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-40084	CBI756325	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-40233	CBI476952	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-40427	CBI692710	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284241100	OA90-40578	CBI580991	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-40583	CBI129655	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-40586	CBI989729	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-40591	CBI911569	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-40861	CBI264267	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-40869	CBI51933	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41665	CBI341559	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41790	CBI672312	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41792	CBI378079	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41794	CBI187453	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41797	CBI646562	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41803	CBI628071	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41805	CBI897792	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41808	CBI182887	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41822	CBI304637	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41832	CBI667787	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41835	CBI309728	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41839	CBI536559	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41848	CBI983035	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41851	CBI749415	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41853	CBI827026	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41857	CBI755710	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41864	CBI38539	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41866	CBI889969	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41868	CBI447611	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41870	CBI113394	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41876	CBI914988	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41878	CBI445512	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41880	CBI805086	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41887	CBI934682	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41897	CBI171578	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41900	CBI602595	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41902	CBI770745	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41920	CBI989276	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41936	CBI115921	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41940	CBI455430	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41943	CBI355422	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41967	CBI58681	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41970	CBI524249	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41974	CBI661010	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41977	CBI636704	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41979	CBI551385	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41983	CBI880086	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41985	CBI930458	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-41990	CBI400184	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-42004	CBI780794	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-42019	CBI689402	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-42255	CBI205053	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-42257	CBI160957	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-4236	CBI547302	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-42471	CBI941487	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-42473	CBI631747	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-42476	CBI71892	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-42489	CBI654996	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-43400	CBI403377	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-43402	CBI235695	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-43404	CBI972336	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-4934	CBI214708	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-4965	CBI879895	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-4982	CBI489936	T	F	F	F	F	F	F	F	F	P	3	
284241100	OA90-4989	CBI996920	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284241100	OA90-7061	CBI988513	T	F	F	F	F	F	F	F	F	F	P	3
284241100	OA90-8021	CBI963546	T	F	F	F	F	F	F	F	F	F	P	3
284241100	OA90-806	CBI599651	T	F	F	F	F	F	F	F	F	F	P	3
284241500	IA000058	Scott's Liquid Gold (aerosol)	T	T	T	T	T	T	T	T	T	F	P	3
284241500	IA000061	Wood Preen	T	T	T	T	T	T	T	T	T	F	P	3
284241500	IA000062	Kwik Deglos	T	T	T	T	T	T	T	T	T	F	P	3
284241500	IA000063	Trewax Wood Cleaner	T	T	T	T	T	T	T	T	T	F	P	3
284241500	IA000064	Watco Satin Wax Natural	T	T	T	T	T	T	T	T	T	F	P	3
284241500	IA000065	Minwax Finishing Paste	T	T	T	T	T	T	T	T	T	F	P	3
284241500	IA000390	Liquid Gold	T	T	T	T	T	T	T	T	T	F	P	3
284241500	IA000544	Peacock Wood Cleaner	T	T	T	T	T	T	T	T	T	F	P	3
284241500	IA000837	Liquid Panel-Nu Wood	T	T	T	T	T	T	T	T	T	F	P	3
284241500	IA001156	Scott's Liquid Gold	T	T	T	T	T	T	T	T	T	F	P	3
284241500	NO113060	emulsifiable solvent cleaners-garage fl	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-10104	CBI397089	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-1065	CBI714952	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-10811	CBI862472	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-11323	CBI721359	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-12100	CBI553748	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-14382	CBI820182	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-15648	CBI389439	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-16113	CBI875838	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-16115	CBI502141	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-17596	CBI108560	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-18515	CBI373128	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-18839	CBI888852	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-19306	CBI500759	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-19412	CBI794550	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-19555	CBI764024	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-19557	CBI581199	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-20085	CBI615146	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-21522	CBI177971	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-21527	CBI973722	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-22098	CBI561282	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-22646	CBI925268	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-23526	CBI464063	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-23529	CBI174127	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-23533	CBI887758	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-24189	CBI533183	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-24360	CBI866391	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-24826	CBI421439	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-2514	CBI700905	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-25266	CBI640397	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-2640	CBI61917	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-27510	CBI506265	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-28774	CBI164132	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-32768	CBI105433	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-35288	CBI224252	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-35744	CBI636179	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-37703	CBI804549	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-37753	CBI589291	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-38610	CBI125660	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-38670	CBI958588	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-41343	CBI884143	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-41347	CBI914120	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-41353	CBI597281	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-42923	CBI680565	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-43905	CBI479370	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-43925	CBI188796	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-4885	CBI66157	T	T	T	T	T	T	T	T	T	F	P	3
284241500	OA90-571	CBI537293	T	T	T	T	T	T	T	T	T	F	P	3



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284241500	OA90-7116	CBI109816	T	T	T	T	T	T	T	T	F	P	3	
284241500	OA90-7611	CBI488668	T	T	T	T	T	T	T	T	F	P	3	
284241500	OA90-7639	CBI606737	T	T	T	T	T	T	T	T	F	P	3	
284241500	OA90-8033	CBI268133	T	T	T	T	T	T	T	T	F	P	3	
284241500	OA90-8038	CBI482900	T	T	T	T	T	T	T	T	F	P	3	
284241500	OA90-8118	CBI344678	T	T	T	T	T	T	T	T	F	P	3	
284241500	OA90-8123	CBI499772	T	T	T	T	T	T	T	T	F	P	3	
284241500	OA90-8164	CBI570643	T	T	T	T	T	T	T	T	F	P	3	
284241500	OA90-868	CBI664628	T	T	T	T	T	T	T	T	F	P	3	
284241500	OA90-9174	CBI122037	T	T	T	T	T	T	T	T	F	P	3	
284241500	OA90-9483	CBI673911	T	T	T	T	T	T	T	T	F	P	3	
284241500	RAD03401	Aerosol Furniture Polish	T	T	T	T	T	T	T	T	F	P	3	
284241500	RAD03402	Aerosol Furniture Polish	T	T	T	T	T	T	T	T	F	P	3	
284241500	RAD03501	Aerosol Wood Panel Polish	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-10084	CBI555861	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-10389	CBI625053	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-10391	CBI103888	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-10405	CBI611864	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-10418	CBI390378	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-11244	CBI578955	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-11247	CBI179670	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-11384	CBI92461	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-11862	CBI61225	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-12251	CBI186426	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-15085	CBI810852	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17019	CBI195630	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17062	CBI329877	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17075	CBI144939	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17083	CBI944924	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17549	CBI942945	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17594	CBI873911	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17781	CBI423272	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17790	CBI72191	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17850	CBI643194	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17853	CBI74259.	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17877	CBI962196	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17894	CBI22111	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-17987	CBI516717	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-18075	CBI30048	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-18465	CBI587095	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-18502	CBI21274	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-18824	CBI55842	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-18826	CBI189240	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-19393	CBI563744	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-19402	CBI315718	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-19931	CBI278199	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-19933	CBI526101	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-20062	CBI976748	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-21685	CBI181857	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23061	CBI193124	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23114	CBI697594	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23116	CBI629492	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23118	CBI265337	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23458	CBI317158	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23460	CBI942449	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23462	CBI764854	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23464	CBI996625	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23466	CBI996567	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23468	CBI176023	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23470	CBI61939	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23472	CBI547493	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284242000	OA90-23474	CBI536044	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23480	CBI266403	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23492	CBI3284.	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-23496	CBI289993	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-24741	CBI336427	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-24753	CBI114968	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-24799	CBI486108	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-24804	CBI780194	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-24806	CBI320538	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-24964	CBI296143	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-25007	CBI651058	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-2508	CBI653760	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-25433	CBI77729.	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-25665	CBI739812	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-26293	CBI838611	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-2715	CBI677086	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-27453	CBI912423	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-27459	CBI339447	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-27460	CBI858157	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-27461	CBI639115	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-27468	CBI300877	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-27483	CBI656546	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-27485	CBI902583	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-27601	CBI426262	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-2809	CBI676772	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-2813	CBI774080	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-2818	CBI700636	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-28769	CBI363091	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-28869	CBI887691	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-28956	CBI28710	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-28961	CBI628982	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-28986	CBI260023	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-29227	CBI255137	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-29746	CBI518807	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-29818	CBI687301	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-3167	CBI749773	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-3216	CBI618736	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-32416	CBI241809	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-32571	CBI533588	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-32573	CBI879396	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-32772	CBI501159	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-32776	CBI105266	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-32977	CBI499120	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-33055	CBI501603	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-33477	CBI699339	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-35541	CBI533502	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-35543	CBI894465	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-35545	CBI609487	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-35549	CBI724257	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-36575	CBI158015	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-36588	CBI20200	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-36598	CBI989526	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-36740	CBI582333	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-36758	CBI984689	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-36855	CBI189350	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-36857	CBI645884	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-36859	CBI639143	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-36861	CBI19125	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-36863	CBI244122	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-37374	CBI229686	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38100	CBI731560	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284242000	OA90-38252	CBI828101	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38254	CBI685627	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38257	CBI691861	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38347	CBI908812	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38409	CBI526742	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38594	CBI568402	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38596	CBI641804	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38598	CBI521188	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38600	CBI696403	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38602	CBI732206	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38638	CBI896328	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38640	CBI341809	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-3879	CBI837639	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-38853	CBI359247	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-39300	CBI553555	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-41528	CBI173924	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-41530	CBI97684	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-41532	CBI721964	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-41534	CBI627693	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-41536	CBI408575	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-41538	CBI166559	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-41540	CBI18372	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-41542	CBI777569	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-41546	CBI223308	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-41548	CBI499588	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-41555	CBI757313	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-41748	CBI331112	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-42225	CBI176782	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-42250	CBI17421	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4267	CBI446371	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4297	CBI443094	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4336	CBI983657	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4368	CBI397701	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4370	CBI271920	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4372	CBI123478	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4374	CBI439060	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4376	CBI133714	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4378	CBI793938	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4380	CBI666373	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4382	CBI956383	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4394	CBI553091	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4398	CBI86655	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-455	CBI34030	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4740	CBI121063	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4742	CBI636986	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4744	CBI470630	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4757	CBI352977	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-4759	CBI813218	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-5832	CBI299933	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-6808	CBI617764	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-7068	CBI216860	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-7531	CBI981751	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-7552	CBI58422	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-7569	CBI637989	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-7571	CBI240816	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-7654	CBI824827	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-7678	CBI706061	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-7698	CBI124882	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-7702	CBI446058	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-7732	CBI80542	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-7745	CBI442610	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284242000	OA90-7747	CBI726882	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-8304	CBI733290	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-942	CBI717451	T	T	T	T	T	T	T	T	F	P	3	
284242000	OA90-9876	CBI979908	T	T	T	T	T	T	T	T	F	P	3	
284242100	N0104005	floor cleaner - cloudy, liquid	T	T	T	T	T	T	T	T	F	P	3	
284242100	N0104009	floor cleaner - liquid, opaque	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104001	floor cleaner	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104002	floor cleaner	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104003	floor cleaner	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104004	floor cleaner (stable to 120f)	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104006	floor cleaner	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104007	floor cleaner - concentrate	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104008	floor cleaner	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104010	floor cleaner (garage)	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104011	floor cleaner - low foam machine applie	F	T	T	T	T	T	T	T	F	P	3	
284242300	N0104012	floor cleaner-low foam machine scrubber	F	T	T	T	T	T	T	T	F	P	3	
284242300	N0104013	floor cleaner-low foam machine scrubber	F	T	T	T	T	T	T	T	F	P	3	
284242300	N0104014	floor cleaner-low foam machine scrubber	F	T	T	T	T	T	T	T	F	P	3	
284242300	N0104015	floor cleaner with fbr	F	T	T	T	T	T	T	T	F	P	3	
284242300	N0104016	floor cleaner - garage floor	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104017	floor cleaner/wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104018	floor cleaner/wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104019	floor cleaner and wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104020	floor cleaner and wax stripper	F	T	T	T	T	T	T	T	F	P	3	
284242300	N0104021	floor cleaner and wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104022	floor cleaner/wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104023	floor wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104024	flr clnr/wax strppr-pwdr,good qual. liq	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104025	floor cleaner/wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104026	floor cleaner/wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104027	wax stripper and cleaner	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104028	liq. non-phos flr clnr and wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104029	floor wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104030	experimental stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104031	heavy duty wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104032	floor finish stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104033	foaming wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104034	wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104035	low foaming wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104036	low foam wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104037	wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104038	wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104039	wax stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104040	waxed floor cleaner	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0104041	heavy duty floor finish stripper	T	T	T	T	T	T	T	T	F	P	3	
284242300	N0111013	hard surface cleaner-floors/wax strippe	T	T	T	T	T	T	T	T	F	P	3	
284244300	IA000001	Esquire Spray Shoe Shine	T	F	F	T	F	T	T	F	F	P	3	
284244300	IA000003	Penny Shoe Shine	T	F	F	T	F	T	T	F	F	P	3	
284244300	IA000004	Justin E-Z On Spray	T	F	F	T	F	T	T	F	F	P	3	
284244300	IA000373	Honor Guard Instant Shine	T	F	F	T	F	T	T	F	F	P	3	
284244300	IA000375	Kiwi Conditioner/Cleaner (shoe polish)	T	F	F	T	F	T	T	F	F	P	3	
284244300	IA000376	Nu-Life Color Shoe Spray	T	F	F	T	F	T	T	F	F	P	3	
284244300	IA000377	Color Spray (shoe polish)	T	F	F	T	F	T	T	F	F	P	3	
284244300	IA000378	Kiwi Spray Shine (shoe polish)	T	F	F	T	F	T	T	F	F	P	3	
284244300	IA000982	Magix Shoe Color Spray	T	F	F	T	F	T	T	F	F	P	3	
284244300	IA000983	Penny Shoe Shine	T	F	F	T	F	T	T	F	F	P	3	
284244300	OA90-27390	CBI583211	T	F	F	T	F	T	T	F	F	P	3	
284244300	OA90-2762	CBI758181	T	F	F	T	F	T	T	F	F	P	3	
284244300	OA90-35441	CBI771163	T	F	F	T	F	T	T	F	F	P	3	
284244300	OA90-37696	CBI108375	T	F	F	T	F	T	T	F	F	P	3	
284244300	OA90-37714	CBI914850	T	F	F	T	F	T	T	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284244300	OA90-37718	CBI166309	T	F	F	T	F	T	T	F	F	P	3	
284244300	OA90-41872	CBI107004	T	F	F	T	F	T	T	F	F	P	3	
284244300	OA90-6584	CBI340546	T	F	F	T	F	T	T	F	F	P	3	
284244300	OA90-9562	CBI494422	T	F	F	T	F	T	T	F	F	P	3	
284246300	IA000006	Premier Suede Renew	T	F	F	F	F	F	T	F	F	P	3	
284246300	IA000534	Spray Suede & Fabric Cleaner	T	T	T	T	T	F	T	T	F	P	3	
284246300	IA000535	Suede Protector	T	F	F	F	F	F	T	F	F	P	3	
284246300	IA000677	Kiwi Suede Spray	T	F	F	F	F	F	T	F	F	P	3	
284246300	IA000823	Added Touch Suede/Fab Cleaner	T	T	T	T	T	F	T	T	F	P	3	
284246300	IA000824	Added Touch Magic Guard	T	T	T	T	T	F	T	T	F	P	3	
284246300	IA000825	E J Suede Protector	T	F	F	F	F	F	T	F	F	P	3	
284246300	IA000826	E J Sneaker Cleaner	T	F	F	T	F	F	F	F	F	P	3	
284246300	OA90-15650	CBI446930	T	F	F	F	F	F	T	F	F	P	3	
284246300	OA90-16125	CBI498199	T	F	F	T	F	T	T	F	F	P	3	
284246300	OA90-35432	CBI942338	T	F	F	T	F	T	T	F	F	P	3	
284246300	OA90-35435	CBI729873	T	F	F	T	F	T	T	F	F	P	3	
284246300	OA90-35439	CBI206814	T	F	F	T	F	T	T	F	F	P	3	
284246300	OA90-35443	CBI149556	T	F	F	T	F	T	T	F	F	P	3	
284246300	OA90-35898	CBI937388	T	F	F	T	F	T	T	F	F	P	3	
284246300	OA90-37698	CBI490556	T	F	F	T	F	T	T	F	F	P	3	
284246300	OA90-37708	CBI290043	T	F	F	T	F	T	T	F	F	P	3	
284246300	OA90-37710	CBI328605	T	F	F	T	F	T	T	F	F	P	3	
284246300	OA90-424	CBI915065	T	F	F	F	F	F	F	F	F	P	3	
284246300	OA90-470	CBI669986	T	F	F	T	F	T	T	F	F	P	3	
284246300	OA90-8395	CBI611648	T	F	F	T	F	T	T	F	F	P	3	
284249800	IA000220	Snap Rust Buster (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
284249800	IA000399	Filigree Silver	T	T	T	T	T	T	T	T	F	P	3	
284249800	IA000400	Goddard's Silver Dip	T	T	T	T	T	T	T	T	F	P	3	
284249800	IA001067	Bust Rust Penetrating Oil	T	T	T	T	T	T	T	T	F	P	3	
284249800	IA001068	Trustan Rust Remover	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107022	metal cleaner -spray on type	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107023	metal cleaner for copper & brass-polish	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107025	acid metal cleaner	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107026	acid metal cleaner	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107027	acid metal cleaner	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107034	aluminum brightener/cleaner	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107035	alum. cleaner&brightener-nonhydrofluori	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107036	alkaline metal cleaner - high quality	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107037	alkaline metal cleaner - good quality	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107038	aluminum cleaner-acid alumin. brightene	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107039	alum cleaner-alkaline alum w/phosphate	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107040	aluminum brightener	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107041	aluminum cleaner	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107048	copper cleaner (paste)	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107051	heavy duty metal cleaner	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107052	metal cleaner-alkaline wash pwder-phosp	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107053	metal cleaner-alkaline wash pwd-nonphos	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107056	metal cleaner - rust removal	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107057	metal cleaner - alkaline	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107058	metal cleaner - powder - spray type	T	T	T	T	T	T	T	T	F	P	3	
284249800	N0107062	rust remover (dip part cleaners)	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-10633	CBI407079	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-10720	CBI852838	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-10778	CBI926783	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11131	CBI213350	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11134	CBI16179	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11417	CBI57146	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-1142	CBI20376.	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11428	CBI681912	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11475	CBI595721	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11479	CBI475843	T	T	T	T	F	F	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284249800	OA90-11659	CBI197315	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11663	CBI947028	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11667	CBI917865	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11671	CBI502949	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11675	CBI815592	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11735	CBI886179	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11737	CBI741521	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11740	CBI822994	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11745	CBI434314	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11762	CBI409149	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11764	CBI664405	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11775	CBI767441	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11778	CBI262851	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11783	CBI480706	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11825	CBI875510	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-11831	CBI221706	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-12103	CBI825336	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-12265	CBI70815	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-12280	CBI694628	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-12297	CBI404241	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-13346	CBI950910	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-13428	CBI852512	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-1374	CBI662971	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-13882	CBI449641	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-14289	CBI529413	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-14374	CBI572867	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-14393	CBI605503	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-14432	CBI529878	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-14448	CBI426627	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-14529	CBI64459	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-15845	CBI793815	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-17376	CBI287741	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-17384	CBI304376	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-17389	CBI87916	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-17485	CBI493887	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-17506	CBI275901	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-17600	CBI776724	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-17859	CBI776000	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-17985	CBI655033	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-18025	CBI409182	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-18032	CBI502165	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-18461	CBI282456	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-18785	CBI902870	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-1892	CBI776667	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-19130	CBI85643	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-19525	CBI697023	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-20048	CBI197789	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-20070	CBI297603	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-20146	CBI970146	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-20149	CBI5016	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-20815	CBI565225	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-20818	CBI806374	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-20852	CBI863541	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-20854	CBI978114	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-21182	CBI852306	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-21508	CBI138880	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-21645	CBI558425	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-21668	CBI678574	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-22086	CBI7191	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-22089	CBI136290	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-22092	CBI382301	T	T	T	T	T	T	T	T	F	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284249800	OA90-22095	CBI534492	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-23080	CBI108882	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-23218	CBI149533	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-23224	CBI326616	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-23232	CBI255582	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-23984	CBI42864	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-24196	CBI251869	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-24198	CBI697058	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-24522	CBI679220	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-24525	CBI394434	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-24556	CBI998802	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-24763	CBI874503	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-24808	CBI526609	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-24846	CBI2030	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-24848	CBI176012	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-24852	CBI911948	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-25009	CBI382620	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-25269	CBI716469	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-25271	CBI875019	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-25358	CBI771883	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-2539	CBI731761	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-25572	CBI158260	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-25574	CBI583138	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-26227	CBI842426	T	F	F	F	F	F	F	F	T	P	3	
284249800	OA90-26231	CBI40418	T	F	F	F	F	F	F	F	T	P	3	
284249800	OA90-26233	CBI600035	T	F	F	F	F	F	F	F	T	P	3	
284249800	OA90-26244	CBI701739	T	F	F	F	F	F	F	F	T	P	3	
284249800	OA90-26246	CBI299498	T	F	F	F	F	F	F	F	T	P	3	
284249800	OA90-26250	CBI72537	T	F	F	F	F	F	F	F	T	P	3	
284249800	OA90-26254	CBI512508	T	F	F	F	F	F	F	F	T	P	3	
284249800	OA90-2643	CBI585955	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-27434	CBI281056	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-27436	CBI708799	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-27455	CBI247995	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-27457	CBI895330	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-27465	CBI559826	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-27466	CBI648983	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-27467	CBI640865	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-2875	CBI150840	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-28761	CBI86849.	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-29945	CBI507020	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-30019	CBI585794	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-30021	CBI131243	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-30047	CBI945640	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-30123	CBI894156	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-30321	CBI258769	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-30416	CBI440813	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-31680	CBI449414	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-31690	CBI871185	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-31743	CBI495006	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-3178	CBI624002	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-31850	CBI723488	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-31852	CBI729179	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-31884	CBI780790	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-31895	CBI850712	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-31921	CBI573171	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-31924	CBI790200	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-31930	CBI301898	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-31934	CBI63128	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-31936	CBI590490	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-32215	CBI21995	T	T	T	T	F	F	T	T	F	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284249800	OA90-3226	CBI624778	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-3245	CBI260097	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-32707	CBI351235	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-32712	CBI2091	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-32717	CBI718913	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-32729	CBI882675	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-32745	CBI580621	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-32754	CBI591619	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-32926	CBI770106	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-32932	CBI309547	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-32968	CBI196420	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-32975	CBI505867	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-32998	CBI143493	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-33001	CBI806305	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-33453	CBI20448	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-33546	CBI20412	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-33554	CBI285947	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-33557	CBI275947	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-33621	CBI671072	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-33669	CBI92124	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-35385	CBI669132	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-35462	CBI63205	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-35729	CBI833982	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-35747	CBI377183	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-35860	CBI794077	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-36549	CBI109880	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-36551	CBI428795	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-37405	CBI806906	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-37407	CBI716875	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-37930	CBI732499	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-38617	CBI365773	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-38692	CBI171782	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-39410	CBI337695	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-3965	CBI144176	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-3986	CBI285413	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-41196	CBI264990	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-41819	CBI409827	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-41908	CBI96457	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-41910	CBI675261	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-42011	CBI591733	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-42015	CBI44843	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-42259	CBI773724	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-42727	CBI350053	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-42859	CBI238013	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-433	CBI986229	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-4869	CBI961944	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-4915	CBI382975	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-4948	CBI347695	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-5249	CBI498442	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-5287	CBI583543	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-5415	CBI593935	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-5455	CBI694107	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-5558	CBI713219	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-609	CBI495559	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-6273	CBI799419	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-628	CBI180924	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-643	CBI290191	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-669	CBI400341	T	F	F	F	F	F	F	F	F	P	3	
284249800	OA90-6953	CBI939311	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-6984	CBI739111	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-7087	CBI548014	T	T	T	T	F	F	T	T	F	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284249800	OA90-7249	CBI289784	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-7353	CBI271720	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-7573	CBI437668	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-7604	CBI398111	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-7663	CBI258849	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-7737	CBI456700	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-8275	CBI943284	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-8436	CBI719372	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-8443	CBI500652	T	T	T	T	F	F	T	T	F	P	3	
284249800	OA90-8589	CBI524197	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-9474	CBI12128	T	T	T	T	T	T	T	T	F	P	3	
284249800	OA90-9896	CBI214436	T	T	T	T	T	T	T	T	F	P	3	
284300000	OA90-26434	CBI855465	F	F	F	F	F	F	F	F	T	P	3	
284300000	OA90-27025	CBI347092	T	T	T	T	T	T	T	T	F	P	3	
284300000	OA90-35059	CBI352200	T	T	T	T	T	T	T	T	F	P	3	
284300000	OA90-36059	CBI333338	T	T	T	T	T	T	T	T	F	P	3	
284303100	NO113122	textile softener	T	F	T	T	F	F	T	F	F	P	3	
284306100	IA000017	Magic Sizing	T	F	F	F	F	F	F	F	F	P	3	
284306100	IA000018	ScotchGard Protector	T	F	F	F	F	F	F	F	F	T	P	3
284306100	IA000087	Static Guard	T	F	F	F	F	F	F	F	F	P	3	
284306100	IA000386	Hagerty Fabric Guard	T	F	F	F	F	F	F	F	F	T	P	3
284306100	IA000387	Scotch Guard	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-15659	CBI911358	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-16109	CBI760506	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-17707	CBI663619	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-20040	CBI469647	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-21482	CBI191945	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-21484	CBI565729	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-21512	CBI735487	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-22027	CBI972191	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-24476	CBI739789	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-24480	CBI30252	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-25422	CBI331999	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-25431	CBI96325	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-25559	CBI67353	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-28744	CBI688782	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-29573	CBI941587	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-29645	CBI611592	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-30180	CBI975181	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-33049	CBI456068	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-35879	CBI865323	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-35891	CBI391674	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-38620	CBI485632	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-38729	CBI969686	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-42230	CBI50587	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-431	CBI604682	F	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-476	CBI394986	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-479	CBI243553	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-484	CBI978449	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-486	CBI224975	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-4931	CBI109425	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-563	CBI706966	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-7863	CBI760496	T	F	F	F	F	F	F	F	F	T	P	3
284306100	OA90-980	CBI334321	T	F	F	F	F	F	F	F	F	T	P	3
284400000	OA90-20081	CBI838740	T	F	F	F	F	F	T	F	F	P	3	
284400000	OA90-6444	CBI870142	T	F	F	F	F	F	T	F	F	P	3	
284400000	OA90-9405	CBI557884	T	F	F	F	F	F	T	F	F	P	3	
284400000	OA90-9429	CBI28409	T	F	F	F	F	F	T	F	F	P	3	
284414900	OA90-12378	CBI801549	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-12383	CBI573816	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-12391	CBI751895	T	F	F	F	F	F	T	F	F	P	2	5

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284414900	OA90-12641	CBI774673	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-12659	CBI593961	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-14750	CBI43041	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-16277	CBI834717	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-21447	CBI472739	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-25011	CBI796740	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-30867	CBI219933	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-30876	CBI531413	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-32546	CBI771214	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-37675	CBI647405	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-41564	CBI58525	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-42756	CBI16185	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-43589	CBI273812	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-43630	CBI121217	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-44061	CBI278285	T	F	F	F	F	F	T	F	F	P	3	5
284414900	OA90-8227	CBI548944	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-8782	CBI189598	T	F	F	F	F	F	T	F	F	P	2	5
284414900	OA90-9022	CBI96666	T	F	F	F	F	F	T	F	F	P	2	5
284414900	RAD01501	Shave Cream	T	F	F	F	F	F	T	F	F	P	2	5
284414900	RAD01502	Shave Cream	T	F	F	F	F	F	T	F	F	P	2	5
284414900	RAD01503	Shave Cream	T	F	F	F	F	F	T	F	F	P	2	5
284415600	OA90-11910	CBI406589	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-11956	CBI104469	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-11987	CBI860550	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-11989	CBI345537	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-12008	CBI507681	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-12010	CBI52678	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-12035	CBI748888	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-12037	CBI804020	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-12328	CBI409191	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-12668	CBI673678	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-13303	CBI905675	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-13305	CBI555439	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-13600	CBI840743	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-14633	CBI460120	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-14638	CBI830776	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-14696	CBI782808	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-14715	CBI579898	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-14779	CBI744187	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-14977	CBI49670.	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-16269	CBI223244	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-16604	CBI794334	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-16638	CBI947446	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-20432	CBI908404	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-20448	CBI760694	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-24565	CBI448956	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-2694	CBI597231	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-28725	CBI547372	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-29026	CBI213742	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-30806	CBI432224	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-30860	CBI193723	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-30869	CBI216281	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-35500	CBI717542	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-35502	CBI478246	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-35504	CBI841811	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-35506	CBI502348	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-35517	CBI847002	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-35519	CBI450167	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-35521	CBI29796	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-35523	CBI659533	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-35526	CBI830670	T	F	F	F	F	F	T	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284415600	OA90-38992	CBI522248	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-39029	CBI848898	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-42524	CBI174989	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-42535	CBI660030	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-42548	CBI866919	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-42553	CBI586761	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-42560	CBI884807	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-42572	CBI832052	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-42574	CBI618231	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-43632	CBI114886	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-43636	CBI482106	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-43648	CBI911645	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-5468	CBI333321	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-5470	CBI862174	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-5525	CBI25049	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-5885	CBI920783	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-5902	CBI953312	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-8734	CBI397633	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-8736	CBI469090	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-8738	CBI690914	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-9380	CBI210972	T	F	F	F	F	F	T	F	F	P	3	
284415600	OA90-9393	CBI826643	T	F	F	F	F	F	T	F	F	P	3	
284415900	OA90-39031	CBI885801	T	F	F	F	F	F	T	F	F	P	3	
284415900	OA90-42562	CBI472493	T	F	F	F	F	F	T	F	F	P	3	
284415900	OA90-42564	CBI804581	T	F	F	F	F	F	T	F	F	P	3	
284415900	OA90-8759	CBI623997	T	F	F	F	F	F	T	F	F	P	3	
284415900	OA90-8774	CBI482491	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-13569	CBI218846	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-13572	CBI63377	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-13574	CBI24981	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-13576	CBI512578	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-13578	CBI17435	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-21464	CBI78332	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-28688	CBI251040	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-29028	CBI188675	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-29032	CBI85437	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-30700	CBI443590	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-3160	CBI931695	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-35427	CBI316102	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-36556	CBI397990	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-5494	CBI555068	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-5496	CBI48680	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-5499	CBI219112	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-5501	CBI195139	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-561	CBI422085	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-6047	CBI276232	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-7491	CBI209378	T	F	F	F	F	F	T	F	F	P	3	
284420000	OA90-9382	CBI794391	T	F	F	F	F	F	T	F	F	P	3	
284421100	N0306003	clear perfume emollient stick	T	F	F	F	F	F	T	F	F	P	3	
284421100	N0306004	cream sachet f-4012	T	F	F	F	F	F	T	F	F	P	3	
284421100	N0306007	fragrance veil f-4006	T	F	F	F	F	F	T	F	F	P	3	
284421100	N0306008	fragrance veil f-4007	T	F	F	F	F	F	T	F	F	P	3	
284421100	N0306009	perfume f-4001	T	F	F	F	F	F	T	F	F	P	3	
284421100	N0306010	perfume stick f-4013	T	F	F	F	F	F	T	F	F	P	3	
284421100	N0306011	pomade perfume f-4014	T	F	F	F	F	F	T	F	F	P	3	
284422300	N0306001	aerosol fragrance mousse	T	F	F	F	F	F	T	F	F	P	3	
284422300	N0306002	aerosol fragrance mousse	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-11889	CBI382893	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-11891	CBI189466	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-11907	CBI263641	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-11935	CBI504839	T	F	F	F	F	F	T	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284422300	OA90-11938	CBI831038	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-11941	CBI32771	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-11969	CBI276365	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-11981	CBI572869	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-12005	CBI73039.	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-12032	CBI21521	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-12061	CBI826646	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-12064	CBI140862	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-12079	CBI189607	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-12082	CBI355826	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-13588	CBI488741	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-13591	CBI491851	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-13594	CBI138735	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-13597	CBI99295	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-14662	CBI33656	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-14665	CBI106282	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-16543	CBI463037	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-16575	CBI787414	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-16599	CBI969102	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-16622	CBI494434	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-16634	CBI762653	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-16655	CBI189456	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-16671	CBI768227	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-16675	CBI602811	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-29047	CBI832203	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-30639	CBI101165	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-30812	CBI349516	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-30815	CBI278274	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-31646	CBI849685	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-31648	CBI234615	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-31668	CBI142962	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-31676	CBI526659	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-3464	CBI381004	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-3560	CBI641161	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-43645	CBI147137	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-5527	CBI846368	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-5529	CBI760980	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-5532	CBI212494	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-5535	CBI271455	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-5537	CBI168977	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-5540	CBI641555	T	F	F	F	F	F	T	F	F	P	3	
284422300	OA90-5868	CBI195851	T	F	F	F	F	F	T	F	F	P	3	
284423500	NO306012	toilet water f-4002	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-11904	CBI811888	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-11923	CBI253281	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-11926	CBI877957	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-11932	CBI215611	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-11950	CBI909678	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-11953	CBI201725	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-11975	CBI603935	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-11978	CBI144556	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-11993	CBI96430	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-11996	CBI33902	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-12002	CBI244475	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-12026	CBI387422	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-12029	CBI923678	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-12039	CBI267175	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-12042	CBI225937	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-12052	CBI217566	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-12058	CBI55389	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-13580	CBI383726	T	F	F	F	F	F	T	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284423500	OA90-13582	CBI48340	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-13584	CBI372420	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-13586	CBI241120	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-14668	CBI835485	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-14671	CBI905582	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-14761	CBI590385	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-14764	CBI292986	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-14767	CBI269088	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-14770	CBI955941	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-14773	CBI205096	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-14776	CBI205933	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16567	CBI747167	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16570	CBI626185	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16589	CBI134516	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16592	CBI447075	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16615	CBI894144	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16618	CBI701213	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16627	CBI845773	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16630	CBI17442	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16641	CBI200434	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16644	CBI910198	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16648	CBI364446	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16651	CBI827995	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16664	CBI744415	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-16667	CBI402077	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-18406	CBI68205	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-18412	CBI724551	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-20440	CBI811768	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-30655	CBI626262	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-30707	CBI928186	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-30742	CBI821271	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-30785	CBI180960	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31638	CBI560892	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31640	CBI964038	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31642	CBI946726	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31644	CBI868703	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31652	CBI927654	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31654	CBI396073	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31656	CBI857610	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31658	CBI863059	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31660	CBI149746	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31662	CBI981920	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31664	CBI927384	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31666	CBI191272	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31670	CBI905264	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-31674	CBI596442	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-43640	CBI245596	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-43652	CBI181332	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-43655	CBI404246	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-5504	CBI127365	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-5506	CBI298381	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-5508	CBI851175	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-5510	CBI319910	T	F	F	F	F	F	T	F	F	P	3	
284423500	OA90-9390	CBI523684	T	F	F	F	F	F	T	F	F	P	3	
284424500	N0306005	cologne f-4003	T	F	F	F	F	F	T	F	F	P	3	
284424500	N0306006	cologne stick f-4015	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-10496	CBI452415	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-10525	CBI115474	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-10527	CBI29671	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-10530	CBI818195	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-10538	CBI390121	T	F	F	F	F	F	T	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284424500	OA90-11894	CBI995245	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-11901	CBI858546	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-11912	CBI339955	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-11920	CBI78639	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-11929	CBI400995	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-11944	CBI891488	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-11947	CBI65713	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-11960	CBI963942	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-11963	CBI891756	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-11966	CBI89862	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-11972	CBI966894	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-11999	CBI374782	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-12015	CBI25275	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-12018	CBI69690.	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-12023	CBI547078	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-12049	CBI168878	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-12055	CBI776702	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-12067	CBI54548	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-12070	CBI904997	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-12073	CBI52959	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-12076	CBI117253	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-13433	CBI265326	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-13439	CBI727020	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-13565	CBI948356	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-13567	CBI370101	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-14446	CBI336968	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-14650	CBI957416	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-14653	CBI429308	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-14720	CBI227052	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-14723	CBI969056	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-16537	CBI810615	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-16546	CBI372786	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-16552	CBI115146	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-16554	CBI924858	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-16565	CBI777059	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-16587	CBI972078	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-16608	CBI56721	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-16612	CBI226203	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-16661	CBI812049	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-18404	CBI348578	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-18410	CBI291523	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-18416	CBI99993	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-19988	CBI175018	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-20430	CBI739352	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-20434	CBI944771	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-20442	CBI112967	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-21435	CBI872131	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-28709	CBI884144	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-29036	CBI158859	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-29038	CBI954514	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-29041	CBI28039	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-29044	CBI890430	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-30771	CBI761619	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-30800	CBI29329	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-30803	CBI505065	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-30818	CBI205322	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-30830	CBI77782	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-30863	CBI701245	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-30872	CBI973615	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-33589	CBI124043	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-33596	CBI930284	T	F	F	F	F	F	T	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284424500	OA90-35498	CBI427587	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-38999	CBI304116	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-39025	CBI870111	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-39027	CBI323797	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-39123	CBI707517	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-4004	CBI46510.	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-4008	CBI37747	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-41562	CBI921267	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-43199	CBI36342	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-43214	CBI21785	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-5482	CBI254080	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-5484	CBI746871	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-5486	CBI336557	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-5488	CBI964661	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-5913	CBI480473	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-5916	CBI416242	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-8650	CBI728181	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-8752	CBI19007	T	F	F	F	F	F	T	F	F	P	3	
284424500	OA90-9385	CBI180693	T	F	F	F	F	F	T	F	F	P	3	
284424500	RAD01901	Cologne	T	F	F	F	F	F	T	F	F	P	3	
284424500	RAD01902	Cologne	T	F	F	F	F	F	T	F	F	P	3	
284430000	OA90-13448	CBI453579	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-13460	CBI651061	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-14059	CBI807148	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-14061	CBI864706	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-18131	CBI789756	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-18142	CBI681443	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-18155	CBI599858	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-18163	CBI976764	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-18169	CBI317813	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-18173	CBI478540	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-18180	CBI675688	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-18182	CBI410742	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-18184	CBI528776	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-18193	CBI19927	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-18197	CBI811071	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-18199	CBI275335	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-36545	CBI592319	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-36562	CBI489806	T	F	F	F	F	F	F	F	F	P	3	
284430000	OA90-7504	CBI307608	T	F	F	F	F	F	F	F	F	P	3	
284431000	OA90-12737	CBI942967	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-14796	CBI836333	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-14798	CBI157228	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-16274	CBI897785	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-1742	CBI220606	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-1745	CBI874909	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-1749	CBI405502	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-1752	CBI935038	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-1757	CBI100227	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-19326	CBI496436	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-2223	CBI866542	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-2453	CBI960449	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-25013	CBI192596	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-2616	CBI478710	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-2621	CBI616924	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-26324	CBI891343	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-33575	CBI805168	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-44057	CBI411381	T	F	F	F	F	F	T	F	F	P	2	4
284431000	OA90-5811	CBI2653.0	T	F	F	F	F	F	T	F	F	P	2	4
284431500	N0307245	hair shampoo, acid	T	F	F	F	F	F	T	F	F	P	2	4
284431500	N0307246	hair shampoo, acid	T	F	F	F	F	F	T	F	F	P	2	4

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284431500	N0307247	hair shampoo, acid	T	F	F	F	F	F	T	F	F	P	2	4
284431500	N0307248	hair shampoo, acid	T	F	F	F	F	F	T	F	F	P	2	4
284431800	N0307249	hair shampoo, cream	T	F	F	F	F	F	T	F	F	P	2	4
284431800	N0307250	hair shampoo, cream	T	F	F	F	F	F	T	F	F	P	2	4
284432200	N0307052	after shampoo conditioning treatment	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307055	alopecia treatment-polysorbate 80 base	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307056	amino acid/nutrient scalp conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307064	balsam hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307065	hair conditioner-short and sassy type	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307076	clear conditioner with protein	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307077	clean-hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307079	clear hair reparative and conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307080	reconditioning paste/damaged hair	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307088	conditioner HC-2001	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307089	conditioner HC-2002	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307090	conditioner HC-2003	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307091	conditioner HC-2004	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307092	conditioner HC-2005	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307093	conditioner HC-2006	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307094	conditioner HC-2007	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307095	conditioner HC-2008	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307096	conditioner HC-2009	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307097	conditioner HC-2010	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307098	conditioner HC-2011	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307099	conditioner for permed hair regular hol	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307100	conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307101	conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307102	conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307103	professional conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307104	condition with pearl lustre effect	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307106	conditioner for dry hair	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307107	detangling conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307108	conditioner for dull, limp hair	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307109	hair conditioner for superior body	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307110	conditioner for permanent waved hair	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307111	hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307118	hair moisturizer	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307128	cream after shampoo conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307129	cream hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307130	cream hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307131	protein hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307143	natural moisturizing factor for hair	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307147	hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307158	deep conditioner with HMF complex	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307159	intensive conditioner with HMF complex	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307160	deep penetrat.hair condition.w/pantheno	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307161	hair conditioner w/vitamin E & pantheno	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307164	economy conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307165	foaming clear conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307166	economy hair conditioner with protein	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307167	premium hair conditioner with protein	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307169	hair tonic	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307170	hair tonic	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307189	hair-balsam	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307190	hair-balsam	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307191	hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307192	hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307193	conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307194	conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307195	hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307196	hair conditioner	T	F	F	F	F	F	T	F	F	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284432200	N0307197	hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307198	hair conditioner for normal hair	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307199	hair conditioner/glosser gel	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307200	hair conditioner/glosser gel	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307201	hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307202	quick-break foam conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307203	scalp and hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307204	hair conditioner/glosser gel	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307205	keratin therapy hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307206	hair conditioning cream	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307207	hair set and conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307208	hair conditioner w/protein - normal hai	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307209	hair conditioner w/ protein - dry hair	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307210	hair conditioner w/ protein - oily hair	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307211	intensive hair treatment with protein	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307222	hair and skin lotion conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307223	lotion hair conditioner-dry damaged hai	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307228	scalp treatment fluid	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307231	hair preparation: conditioner-liquid	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307232	hair preparation: conditioner-solid	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307233	hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307236	cold wave cream	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307289	hair-tonic-antidandruff	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307302	lotion hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307303	lotion hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307304	microemulsion	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307306	moisturizing spray conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307307	protein conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307308	mousse condit. w/hair-setting effect I	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307309	mousse condit. w/hair-setting effect II	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307310	mousse condit. w/hair-setting effect II	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307314	new generation-type hair restorer	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307315	polysorbate-type hair rest.w/vasodilato	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307326	oil free clear hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307327	oil free clear hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307340	remoisturizing conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307341	variable conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307342	rich cream moisturizing treatment	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307344	scalp cond. w/ethylnicotinate&kallikrei	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307345	scalp cond. w/vasodilator & rubifacient	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307348	silky hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307364	spray on/leave on hair condition. w/bod	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307365	stearalkonium Cl cream hair conditioner	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307374	variable conditioning	T	F	F	F	F	F	T	F	F	P	3	
284432200	N0307375	water-in-silicone vitaminized hair cond	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-12681	CBI695404	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-13609	CBI341211	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-1724	CBI735844	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19252	CBI4628	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19254	CBI444829	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19256	CBI925746	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19258	CBI687259	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19260	CBI354860	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19262	CBI310176	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19264	CBI839463	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19266	CBI234376	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19269	CBI72541	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19274	CBI893744	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19277	CBI514081	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19282	CBI405901	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-19284	CBI376945	T	F	F	F	F	F	T	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284432200	OA90-19868	CBI565628	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-21422	CBI606115	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-22066	CBI186855	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-22070	CBI46758	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-22074	CBI969882	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-22078	CBI42218	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-2604	CBI925091	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-2610	CBI373978	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-28655	CBI476243	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-30564	CBI730878	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-30572	CBI118144	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-30628	CBI112605	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-38550	CBI707190	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-4122	CBI700986	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-43203	CBI461473	T	F	F	F	F	F	T	F	F	P	3	
284432200	OA90-8764	CBI791977	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307048	aerosol sculpting mousse	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307049	stiff-hold conditioning-styling mousse	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307051	alcohol-free styling mousse	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307119	conditioning-styling mousse-normal	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307120	conditioning-styling mousse-firm	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307121	conditioning styling mousse-soft	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307122	conditioning styling mousse-firm	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307123	conditioning styling mousse:quick dryin	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307124	conditioning styling mousse:alcohol-fre	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307213	setting and conditioning styling foam	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307294	hot oil hair treatment mousse	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307319	non-aerosol mousse with protein	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307321	non-alcohol styling mousse concentrate	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307346	setting-conditioning mousse aqueous-alc	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307347	setting-conditioning mousse alcohol fre	T	F	F	F	F	F	T	F	F	P	3	
284432600	N0307372	styling mousse with panthenol	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-10619	CBI791445	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-13154	CBI929860	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-13613	CBI145968	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-1523	CBI815653	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-18377	CBI352643	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-22527	CBI993531	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-22590	CBI479374	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-24590	CBI430182	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-2632	CBI900210	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-2748	CBI72652	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-29262	CBI68058	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-34245	CBI785477	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-34247	CBI694122	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-35515	CBI656705	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-37330	CBI132047	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-38542	CBI815803	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-39016	CBI470478	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-39018	CBI328701	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-43591	CBI384537	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-43865	CBI405478	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-5659	CBI227370	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-5948	CBI543097	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-8072	CBI843245	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-877	CBI955439	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-9075	CBI965192	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-9496	CBI337871	T	F	F	F	F	F	T	F	F	P	3	
284432600	OA90-9578	CBI171347	T	F	F	F	F	F	T	F	F	P	3	
284432600	RAD00801	Mousse Hair Set/Conditioning Product	T	F	F	F	F	F	T	F	F	P	3	
284432600	RAD00802	Mousse Hair Set/Conditioning Product	T	F	F	F	F	F	T	F	F	P	3	

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284432600	RAD00803	Mousse Hair Set/Conditioning Product	T	F	F	F	F	F	T	F	F	P	3	
284432600	RAD00804	Mousse Hair Set/Conditioning Product	T	F	F	F	F	F	T	F	F	P	3	
284432600	RAD01001	Specialty Mousse Formulation	T	F	F	F	F	F	T	F	F	P	3	
284432600	RAD01002	Specialty Mousse Formulation	T	F	F	F	F	F	T	F	F	P	3	
284432600	RAD01003	Specialty Mousse Formulation	T	F	F	F	F	F	T	F	F	P	3	
284432600	RAD01004	Specialty Mousse Formulation	T	F	F	F	F	F	T	F	F	P	3	
284432600	RAD01005	Specialty Mousse Formulation	T	F	F	F	F	F	T	F	F	P	3	
284432600	RAD01101	Sunscreen Mousse	T	F	F	F	F	F	T	F	F	P	3	
284432600	RAD01102	Sunscreen Mousse	T	F	F	F	F	F	T	F	F	P	3	
284432600	RAD01201	Baby Care Mousse	T	F	F	F	F	F	T	F	F	P	3	
284432600	RAD01202	Baby Care Mousse	T	F	F	F	F	F	T	F	F	P	3	
284433900	N0307117	conditioning perm	T	F	F	F	F	F	T	F	F	P	3	
284433900	N0307330	permanent wave lotion	T	F	F	F	F	F	T	F	F	P	3	
284433900	N0307331	permanent wave neutralizer	T	F	F	F	F	F	T	F	F	P	3	
284433900	N0307332	permanent wave lotion	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307059	hair pomade	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307133	hair cream no.234	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307168	emollient hair dressing	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307214	hair cream	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307215	hair cream	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307217	hair dressing	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307218	hairdressing cream	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307219	hair dressing cream	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307220	top dressing	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307224	hair groom liquid cream	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307225	hydroalcoholic clear liquid hair-groom	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307226	nongreasy hair-groom	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307227	hair polish	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307229	hair pomade	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307290	o/w-hair-dressing-cream	T	F	F	F	F	F	T	F	F	P	3	
284434100	N0307305	oil in water hair dressing	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-13603	CBI640540	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-13617	CBI755134	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-22523	CBI405833	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-22565	CBI660126	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-22570	CBI721074	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-22576	CBI170560	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-27374	CBI124683	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-30586	CBI644807	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-30934	CBI198967	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-34261	CBI664701	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-38546	CBI400792	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-39033	CBI641628	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-8757	CBI993856	T	F	F	F	F	F	T	F	F	P	3	
284434100	OA90-8762	CBI377963	T	F	F	F	F	F	T	F	F	P	3	
284435100	N0307063	arianor hair color gel	T	F	F	F	F	F	T	F	F	P	2	4
284435100	N0307187	gel hair color	T	F	F	F	F	F	T	F	F	P	2	4
284435100	N0307188	monochromatic hair color gel II	T	F	F	F	F	F	T	F	F	P	2	4
284435100	N0307221	opaque peroxide	T	F	F	F	F	F	T	F	F	P	2	4
284435100	N0307295	semi-permanent coloring shampoo mousse	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-10350	CBI901028	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-19248	CBI450315	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-22082	CBI63313	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-22084	CBI946510	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-22537	CBI234634	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-30520	CBI65415	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-30552	CBI899432	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-30554	CBI247085	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-30557	CBI414151	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-30560	CBI151808	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-30562	CBI776473	T	F	F	F	F	F	T	F	F	P	2	4

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284435100	OA90-30570	CBI971916	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-30583	CBI112080	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-37317	CBI585664	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-37319	CBI593069	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-37321	CBI21177	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-37325	CBI512535	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-38548	CBI917441	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-4073	CBI723053	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-4076	CBI16268.	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-4092	CBI930398	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-4103	CBI408188	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-41744	CBI475343	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-43824	CBI782127	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-43861	CBI246597	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-5004	CBI458681	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-5938	CBI935597	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-5941	CBI274173	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-5944	CBI950435	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-5946	CBI551116	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-5963	CBI362837	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-5967	CBI548381	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-5979	CBI384837	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-8922	CBI291465	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-8924	CBI837781	T	F	F	F	F	F	T	F	F	P	2	4
284435100	OA90-8937	CBI338416	T	F	F	F	F	F	T	F	F	P	2	4
284436300	N0307001	aerosol hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307002	aerosol hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307003	aerosol hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307004	aerosol hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307005	aerosol hair spray-propane/butane/CH2OH	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307006	aerosol hair spray w/dimethylether/CH2O	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307007	aerosol hair spray w/ FCs & ethanol	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307008	aerosol hair spray w/ propane/butane/FC	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307009	aerosol hair spray w/ propane/butane/FC	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307011	hair fixative with isopropanol	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307012	hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307013	aerosol hairspray-mixed propellant	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307014	aerosol hairspray-mixed propellant	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307015	aerosol hairspray containing sunscreen	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307016	aerosol hairspray with mixed propellant	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307017	aerosol hairspray-mixed propellant	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307018	aerosol hairspray-type regular	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307019	aerosol hairspray-type dry	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307020	aerosol hairspray for spiked hair	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307021	aerosol hairspray-DME-type regular	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307022	aerosol hairspray-DME-type extra	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307023	aerosol hairspray-DME-type super	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307024	aerosol hairspray-type regular	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307025	aerosol hairspray-type extra	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307026	aerosol hairspray-type super	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307027	aerosol hairspray-type anhydrous	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307028	aerosol hairspray-type aqueous-alcoholi	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307029	aerosol hairspray-hydrocarbon-type anhy	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307030	aerosol hairspray-hydrocarbon-type	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307031	aerosol hairspray-hydrocarbon-type anhy	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307032	aerosol hairspray-hydrocarbon-type reg	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307033	aerosol hairspray-hydrocarbon-type reg	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307034	aerosol hairspray-hydrocarbon-type extr	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307035	aerosol hairspray-hydrocarbon-type supe	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307036	aerosol hairspray-hydrocarbon-type	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307037	aerosol hairspray-carbon dioxide	T	F	F	F	F	F	T	F	F	P	3	

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284436300	N0307038	aerosol hairspray-hydrocarbon-type	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307039	aerosol hairspray-carbon dioxide	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307040	aerosol hairspray-hydrocarbon-type	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307041	aerosol hairspray-carbon dioxide	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307042	aerosol hairspray-mixed propellant	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307043	aerosol hairspray-mixed propellant	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307044	aerosol hairspray with UV protection	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307045	aerosol hair spray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307050	aerosol styling spray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307060	aqueous spray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307061	hair spray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307062	hair spray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307252	hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307254	hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307255	hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307257	hairspray for normal hair II	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307258	hairspray for normal hair III	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307259	hairspray for normal hair IV	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307260	hairspray for normal hair V	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307261	hairspray for normal hair VI	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307262	hairspray for normal hair VII	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307263	hairspray for normal hair VIII	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307265	hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307266	hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307267	hair spray preparation	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307268	hair spray preparation	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307269	hair spray preparation	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307270	hair spray preparation	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307271	hair spray preparation	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307273	hair spray preparation	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307274	hair spray preparation	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307296	hydrocarbon-propelled super hairspray A	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307297	hydrocarbon-propelled super hairspray B	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307350	soft hairspray-aerosol-regular	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307351	soft hairspray-aerosol-extra	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307352	soft hairspray-aerosol-regular	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307353	soft hairspray-aerosol-extra	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307354	soft hairspray-aerosol-regular	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307355	soft hairspray-aerosol-extra	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307356	soft hairspray-mech. actuated-regular	T	F	F	F	F	F	T	F	F	P	3	
284436300	N0307357	soft hairspray-mech. actuated-extra	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-10325	CBI744985	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-10328	CBI661142	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-10624	CBI866202	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-10628	CBI311251	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-10636	CBI912159	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-13149	CBI395958	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-13161	CBI539685	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-13186	CBI622382	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-13605	CBI921950	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-1520	CBI693318	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-1562	CBI787044	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-1596	CBI322472	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-1603	CBI337522	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-18362	CBI824437	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-18370	CBI4794	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-18396	CBI759111	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-20375	CBI514732	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-20380	CBI99661	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-20384	CBI813911	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-20388	CBI307678	T	F	F	F	F	F	T	F	F	P	3	

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284436300	OA90-20392	CBI396753	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-20397	CBI788215	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-2055	CBI335116	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-2059	CBI805269	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-2063	CBI717151	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-2066	CBI152643	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-2070	CBI751590	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-22540	CBI440323	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-22573	CBI744655	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-22595	CBI468637	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-24576	CBI588176	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-24580	CBI161594	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-2742	CBI233349	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-28727	CBI49780.	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-29257	CBI900847	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-30642	CBI431050	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-30646	CBI311443	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-33572	CBI536805	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-34258	CBI615802	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-34263	CBI58221.	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-37335	CBI103020	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-38537	CBI228616	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-38552	CBI292209	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-38565	CBI31526	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-39009	CBI281701	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-39012	CBI520535	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-4113	CBI65798	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-41740	CBI127000	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-43846	CBI700338	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-43887	CBI565046	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-5646	CBI391526	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-5991	CBI489261	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-6000	CBI92883	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-6652	CBI269493	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-6904	CBI784070	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-7989	CBI753541	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-8190	CBI6909	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-861	CBI936472	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-8766	CBI454842	T	F	F	F	F	F	T	F	F	P	3	
284436300	OA90-9478	CBI116007	T	F	F	F	F	F	T	F	F	P	3	
284436300	RAD00601	Hair Spray	T	F	F	F	F	F	T	F	F	P	3	
284436300	RAD00602	Hair Spray	T	F	F	F	F	F	T	F	F	P	3	
284436300	RAD00603	Hair Spray	T	F	F	F	F	F	T	F	F	P	3	
284436300	RAD00604	Hair Spray	T	F	F	F	F	F	T	F	F	P	3	
284436300	RAD00701	Hair Conditioner Spray	T	F	F	F	F	F	T	F	F	P	3	
284436300	RAD00702	Hair Conditioner Spray	T	F	F	F	F	F	T	F	F	P	3	
284436300	RAD00703	Hair Conditioner Spray	T	F	F	F	F	F	T	F	F	P	3	
284436300	RAD00704	Hair Conditioner Spray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307010	pump spray with ethanol	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307046	super-hold hair spray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307047	hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307057	amopher pump hair spray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307058	pump hair spray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307086	comb-out sheen spray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307087	pump hair set spray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307126	conditioning and spiking spray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307171	fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307172	fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307173	fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307174	fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307175	fixative	T	F	F	F	F	F	T	F	F	P	3	

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284436400	N0307176	fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307177	fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307178	fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307179	fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307180	fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307181	fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307182	fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307183	fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307184	hair fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307251	hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307253	hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307256	hairspray for normal hair I	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307264	hairspray for normal hair IX	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307272	hair spray preparation	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307275	hair spray preparation	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307276	hairspray-mechanically actuated-regular	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307277	hairspray-mechanically actuated-extra	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307278	soft hairspray-mechanically actuated-re	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307279	soft hairspray-mechanically actuated-ex	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307280	hair spray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307281	pump hair spray fixative	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307282	hairspray (mechanically actuated)	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307288	pump super-hold hair spray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307291	hard to hold pump hairspray	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307292	non-aerosol styling spritz	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307316	non-aerosol hair spray with protein	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307317	non-aerosol hair spray w/protein-soft	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307318	non-aerosol hair spray w/protein-strong	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307334	pump type hairspray-regular	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307335	pump type hairspray-extra	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307337	pump type hairspray-regular	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307338	pump type hairspray-extra	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307358	hairspray (mechanically actuated)	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307359	soft hairspray-mech. actuated-regular	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307360	soft hairspray-mech. actuated-extra	T	F	F	F	F	F	T	F	F	P	3	
284436400	N0307361	hairspray (mechanically actuated)	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-10345	CBI57754	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-10347	CBI740146	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-10617	CBI631303	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-13312	CBI445627	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-13611	CBI624471	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-13619	CBI906586	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-13623	CBI869044	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-15168	CBI846712	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-15171	CBI273019	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-16244	CBI234824	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-18400	CBI191176	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-19884	CBI269671	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-21086	CBI101303	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-21116	CBI57499	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-22507	CBI451872	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-22518	CBI651727	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-22547	CBI539141	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-22562	CBI439163	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-22579	CBI801604	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-22584	CBI725235	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-22587	CBI873033	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-24574	CBI419200	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-24584	CBI161994	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-24588	CBI876508	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-30650	CBI909276	T	F	F	F	F	F	T	F	F	P	3	

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284436400	OA90-30738	CBI28014	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-30769	CBI550386	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-34249	CBI782392	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-34254	CBI866764	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-34256	CBI487092	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-34267	CBI299212	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-37341	CBI224636	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-38540	CBI115810	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-39005	CBI338952	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-39007	CBI929454	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-39061	CBI390637	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-39063	CBI94335	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-4082	CBI788023	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-4085	CBI521027	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-4097	CBI60089	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-4106	CBI10410	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-41746	CBI685174	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-42541	CBI402090	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-43991	CBI39763	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-6635	CBI210430	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-6915	CBI841285	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-6928	CBI382611	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-6933	CBI982541	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-6940	CBI348952	T	F	F	F	F	F	T	F	F	P	3	
284436400	OA90-9069	CBI316288	T	F	F	F	F	F	T	F	F	P	3	
284436500	N0307054	clear creme rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307082	oil-free clear rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307083	clear conditioning hair rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307084	clear hair rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307085	clear hair rinse with protein	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307105	clear-rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307115	conditioning cream rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307116	protein creme rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307132	cream hair rinse with protein no.172	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307134	cream rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307135	cream rinse with sunscreen	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307136	cream-rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307137	cream-rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307138	cream-rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307139	cream-rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307140	cream-rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307141	creme rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307142	cream rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307144	creme rinse-conditioner	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307145	creme rinse-conditioner	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307146	cream rinse and conditioner	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307150	creme rinse normal to dry hair	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307151	creme rinse normal to oily hair	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307152	creme rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307153	hair rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307234	hair rinse emulsion (thickly liquid)	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307300	lotion creme rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307301	lotion creme rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307328	"oil free" creme rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307329	"super" active creme rinse	T	F	F	F	F	F	T	F	F	P	2	4
284436500	N0307378	alcohol free clear creme rinse	T	F	F	F	F	F	T	F	F	P	2	4
284439500	N0307053	comb-out oil sheen spray	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307066	hot non-oil hair treatment	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307067	blow-dry lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307068	blow-dry lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307069	blow-wave lotion	T	F	F	F	F	F	T	F	F	P	3	



Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284439500	N0307070	cationic creme hair rinse-pearlescent	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307071	protein creme rinse	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307072	cationic protein conditioning hair rins	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307073	oil-free clear rinse	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307074	caustic hair straightener no.280	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307075	bisulfite hair straightener no.281	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307078	clear gel	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307112	conditioner-setting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307113	wave set concentrate for 1:9 dilution	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307114	blow waving lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307125	hair styling gel	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307127	conditioning styling gel	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307148	creme hair relaxer	T	F	F	F	F	F	T	F	F	P	3	
284439500	n0307149	Pytosterol hair relaxer	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307154	curl activator gel microemulsion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307155	hair relaxer	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307156	curl moisturizing spray	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307157	microemulsion sheen activator/moisturiz	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307162	detangling spritz	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307163	setting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307185	gelatin sculpting gel	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307186	spiking & styling shining gel	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307212	hair conditioning-styling gel	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307216	butch stick	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307230	hot oil treatment	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307235	setting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307237	hair setting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307238	hair setting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307239	hair setting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307240	hair setting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307241	hair setting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307242	setting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307243	hairsetting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307244	setting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307283	setting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307284	wave-set concentrate for 1:9 dilution	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307285	hair straightener with lithium hydroxid	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307286	leave-on hair treatmt spray w/ sunscre	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307287	hair styling gel	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307293	wave set concentrate	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307298	instant curl moisturizer	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307299	instant curl moisturizer with silicone	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307311	mousse hair-setting lotion-firm foam-I	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307312	mousse hair-setting lotion-firm foam-II	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307313	setting lotion in gel form	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307320	pre-blow dry hair protectant	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307322	styling gel	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307323	non-aq. conditioner-setting lotion-norm	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307324	non-aq. conditioner-setting lotion-extr	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307325	setting lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307333	pre-blow dry lotion	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307336	styling "spritz"	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307339	styling spritz	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307343	spray mist moisturizer	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307349	styling gel	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307362	spray detangler	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307363	spray detangler for oily hair	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307366	styling gel with protein	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307367	styling gel with protein-soft hold	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307368	styling gel with protein-hard hold	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307369	hair weather protectant 'spritz'	T	F	F	F	F	F	T	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284439500	n0307370	Styling glaze	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307371	styling spritz	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307373	vitamin condition&set lotion w/pantheno	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307376	vitamin styling gel	T	F	F	F	F	F	T	F	F	P	3	
284439500	N0307377	vitamin men's styling gel	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-10331	CBI564372	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-10339	CBI182831	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-10613	CBI830633	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-12516	CBI522206	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-14802	CBI302989	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-19880	CBI116920	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-19886	CBI449569	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-19888	CBI209415	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-19892	CBI192651	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-24568	CBI797073	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-24570	CBI960388	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-30924	CBI100075	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-37315	CBI127983	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-37677	CBI342839	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-4089	CBI997297	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-43827	CBI305555	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-43831	CBI427093	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-43835	CBI855635	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-43837	CBI661599	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-43839	CBI63341	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-43858	CBI840378	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-43877	CBI40830	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-4698	CBI953263	T	F	F	F	F	F	T	F	F	P	3	
284439500	OA90-5651	CBI253037	T	F	F	F	F	F	T	F	F	P	3	
284442100	OA90-2680	CBI147231	T	F	T	F	F	T	F	F	P	3		
284442100	OA90-2682	CBI537367	T	F	T	F	F	T	F	F	P	3		
284442100	OA90-37671	CBI918407	T	F	T	F	F	T	F	F	P	3		
284442100	OA90-43223	CBI597803	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-18853	CBI394050	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-19984	CBI507602	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-19986	CBI27344	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-19990	CBI434098	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-19996	CBI879655	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-26320	CBI255159	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-2676	CBI99555	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-2684	CBI943731	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-2687	CBI756485	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-27372	CBI528155	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-29054	CBI423413	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-29202	CBI965339	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-29208	CBI659514	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-29214	CBI742214	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-30294	CBI718947	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-30297	CBI725707	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-34438	CBI610545	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-39090	CBI205322	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-39159	CBI914642	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-39161	CBI936097	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-42526	CBI574305	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-42528	CBI57545	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-42532	CBI855477	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-42537	CBI204945	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-42539	CBI325628	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-42566	CBI786508	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-42568	CBI111514	T	F	T	F	F	T	F	F	P	3		
284449800	OA90-42578	CBI271374	T	F	T	F	F	T	F	F	P	3		

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284449800	OA90-42750	CBI442833	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-42752	CBI805454	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-43212	CBI388544	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-4438	CBI582177	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-5853	CBI208777	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-5855	CBI932420	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-5857	CBI67841	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-7810	CBI782397	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-7813	CBI948054	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-846	CBI949590	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-8660	CBI789221	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-8663	CBI530484	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-8665	CBI428303	T	F	T	T	F	F	T	F	F	P	3	
284449800	OA90-8698	CBI37828	T	F	T	T	F	F	T	F	F	P	3	
284461100	OA90-17676	CBI6567	T	F	F	F	F	F	T	F	F	P	3	
284461100	OA90-17680	CBI496911	T	F	F	F	F	F	T	F	F	P	3	
284461100	OA90-2602	CBI31579	T	F	F	F	F	F	T	F	F	P	3	
284461100	OA90-30533	CBI457952	T	F	F	F	F	F	T	F	F	P	3	
284461100	OA90-35468	CBI530779	T	F	F	F	F	F	T	F	F	P	3	
284461100	OA90-36910	CBI452786	T	F	F	F	F	F	T	F	F	P	3	
284461100	OA90-36968	CBI199009	T	F	F	F	F	F	T	F	F	P	3	
284461100	OA90-37040	CBI30641	T	F	F	F	F	F	T	F	F	P	3	
284461100	OA90-39003	CBI184062	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-12443	CBI178224	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-12468	CBI581363	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-12471	CBI924651	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-12523	CBI150750	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-12556	CBI609472	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-12589	CBI339734	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-12700	CBI41482	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-12802	CBI175612	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-12811	CBI284190	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-14726	CBI375151	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-14800	CBI116195	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-19232	CBI385237	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-19236	CBI801905	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-25944	CBI254035	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-2630	CBI927899	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-30888	CBI320440	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3317	CBI975730	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3320	CBI933436	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3323	CBI267503	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3326	CBI156202	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3329	CBI558212	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3332	CBI505252	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3335	CBI762812	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3338	CBI894799	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3341	CBI438515	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3344	CBI672883	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3347	CBI830028	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3424	CBI827284	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3427	CBI315483	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3430	CBI22357	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3433	CBI987237	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3436	CBI639772	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3439	CBI260646	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-3501	CBI531903	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-36998	CBI8920.4	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-37055	CBI39015	T	F	F	F	F	F	T	F	F	P	3	
284461300	OA90-5518	CBI287696	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12375	CBI743526	T	F	F	F	F	F	T	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284461700	OA90-12393	CBI123325	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12418	CBI279224	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12420	CBI187522	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12424	CBI460883	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12445	CBI216833	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12456	CBI831897	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12518	CBI866059	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12560	CBI198415	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12579	CBI671484	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12581	CBI359338	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12583	CBI596383	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12661	CBI823889	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12663	CBI243061	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12687	CBI931064	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12692	CBI796340	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12717	CBI284051	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12735	CBI79685.	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12739	CBI650256	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12746	CBI538855	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12789	CBI479718	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12800	CBI775593	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12806	CBI175352	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12814	CBI893752	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12817	CBI354112	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-12821	CBI689673	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-14811	CBI417341	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-16216	CBI227972	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-16219	CBI759846	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-16222	CBI483270	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-16231	CBI16824	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-16262	CBI485840	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-20438	CBI77524	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-21077	CBI344343	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-21079	CBI193604	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-21081	CBI3755	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-21306	CBI82360	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-2587	CBI427320	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-2600	CBI503144	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-30526	CBI508997	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-30592	CBI884285	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-30880	CBI918280	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-3138	CBI32636	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-36992	CBI405412	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-37025	CBI795801	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-37033	CBI631920	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-37042	CBI457471	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-37051	CBI938709	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-37053	CBI544581	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-43209	CBI700410	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-43935	CBI78004	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-43938	CBI867401	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-43941	CBI358405	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-4657	CBI8242	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-4775	CBI783586	T	F	F	F	F	F	T	F	F	P	3	
284461700	OA90-8770	CBI380351	T	F	F	F	F	F	T	F	F	P	3	
284461900	OA90-12430	CBI323982	T	F	F	F	F	F	T	F	F	P	3	
284461900	OA90-14743	CBI721989	T	F	F	F	F	F	T	F	F	P	3	
284461900	OA90-30594	CBI123270	T	F	F	F	F	F	T	F	F	P	3	
284461900	OA90-4796	CBI312100	T	F	F	F	F	F	T	F	F	P	3	
284462100	OA90-12501	CBI450824	T	F	F	F	F	F	T	F	F	P	3	
284462100	OA90-12637	CBI696835	T	F	F	F	F	F	T	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284462100	OA90-12730	CBI497681	T	F	F	F	F	F	T	F	F	P	3	
284462100	OA90-14786	CBI238694	T	F	F	F	F	F	T	F	F	P	3	
284462100	OA90-34488	CBI145705	T	F	F	F	F	F	T	F	F	P	3	
284462100	OA90-44067	CBI967392	T	F	F	F	F	F	T	F	F	P	3	
284462100	OA90-9570	CBI626789	T	F	F	F	F	F	T	F	F	P	3	
284462200	OA90-12830	CBI296855	T	F	F	F	F	F	T	F	F	P	3	
284462200	OA90-20446	CBI220784	T	F	F	F	F	F	T	F	F	P	3	
284462200	OA90-2770	CBI352102	T	F	F	F	F	F	T	F	F	P	3	
284462200	OA90-34434	CBI386849	T	F	F	F	F	F	T	F	F	P	3	
284462200	OA90-34436	CBI550906	T	F	F	F	F	F	T	F	F	P	3	
284462200	OA90-34479	CBI294288	T	F	F	F	F	F	T	F	F	P	3	
284462200	OA90-34481	CBI491257	T	F	F	F	F	F	T	F	F	P	3	
284462200	OA90-5543	CBI603683	T	F	F	F	F	F	T	F	F	P	3	
284462300	OA90-14958	CBI573275	T	F	F	F	F	F	T	F	F	P	3	
284462300	OA90-16209	CBI625549	T	F	F	F	F	F	T	F	F	P	3	
284462300	OA90-30842	CBI519417	T	F	F	F	F	F	T	F	F	P	3	
284462300	OA90-30845	CBI50492	T	F	F	F	F	F	T	F	F	P	3	
284462300	OA90-37046	CBI488301	T	F	F	F	F	F	T	F	F	P	3	
284462300	OA90-4016	CBI277662	T	F	F	F	F	F	T	F	F	P	3	
284462400	OA90-16583	CBI557863	T	F	F	F	F	F	T	F	F	P	3	
284462400	OA90-3590	CBI891384	T	F	F	F	F	F	T	F	F	P	3	
284462400	OA90-3592	CBI823073	T	F	F	F	F	F	T	F	F	P	3	
284462400	OA90-8746	CBI764854	T	F	F	F	F	F	T	F	F	P	3	
284462400	OA90-8749	CBI199620	T	F	F	F	F	F	T	F	F	P	3	
284462500	OA90-12413	CBI648471	T	F	F	F	F	F	T	F	F	P	3	
284462500	OA90-14707	CBI873868	T	F	F	F	F	F	T	F	F	P	3	
284462500	OA90-36959	CBI582246	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-12416	CBI991919	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-12628	CBI192090	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-12657	CBI896058	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-13308	CBI976684	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-13559	CBI901473	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-13563	CBI924048	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-16204	CBI309312	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-16236	CBI737333	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-16249	CBI798957	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-1726	CBI450231	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-19838	CBI636094	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-19861	CBI363880	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-21243	CBI321186	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-21355	CBI139241	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-21405	CBI401186	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-22908	CBI693002	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-22911	CBI739673	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-2479	CBI677500	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-3055	CBI627204	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-3546	CBI968072	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-3552	CBI602475	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-36940	CBI184182	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-3710	CBI709007	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-3712	CBI620235	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-42746	CBI310277	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-43634	CBI292292	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-4700	CBI556343	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-4799	CBI433691	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-4801	CBI403135	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-5472	CBI719791	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-5476	CBI464644	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-5490	CBI881704	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-6922	CBI77634	T	F	F	F	F	F	T	F	F	P	3	
284462600	OA90-9491	CBI919994	T	F	F	F	F	F	T	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284462900	OA90-12597	CBI907156	T	F	F	F	F	F	T	F	F	P	3	
284462900	OA90-12674	CBI198062	T	F	F	F	F	F	T	F	F	P	3	
284462900	OA90-12733	CBI557746	T	F	F	F	F	F	T	F	F	P	3	
284462900	OA90-12750	CBI192351	T	F	F	F	F	F	T	F	F	P	3	
284462900	OA90-26326	CBI814250	T	F	F	F	F	F	T	F	F	P	3	
284462900	OA90-26328	CBI13634	T	F	F	F	F	F	T	F	F	P	3	
284462900	OA90-37022	CBI958191	T	F	F	F	F	F	T	F	F	P	3	
284462900	OA90-37692	CBI274329	T	F	F	F	F	F	T	F	F	P	3	
284462900	OA90-43207	CBI152434	T	F	F	F	F	F	T	F	F	P	3	
284462900	OA90-43962	CBI587933	T	F	F	F	F	F	T	F	F	P	3	
284462900	OA90-4663	CBI496377	T	F	F	F	F	F	T	F	F	P	3	
284462900	OA90-4689	CBI788585	T	F	F	F	F	F	T	F	F	P	3	
284462900	OA90-4721	CBI615982	T	F	F	F	F	F	T	F	F	P	3	
284471500	OA90-14756	CBI535048	T	F	F	F	F	F	T	F	F	P	3	
284471500	OA90-3411	CBI593635	T	F	F	F	F	F	T	F	F	P	3	
284471500	OA90-3413	CBI554057	T	F	F	F	F	F	T	F	F	P	3	
284471500	OA90-3415	CBI3203	T	F	F	F	F	F	T	F	F	P	3	
284471500	OA90-3488	CBI600393	T	F	F	F	F	F	T	F	F	P	3	
284471500	OA90-3491	CBI968425	T	F	F	F	F	F	T	F	F	P	3	
284471500	OA90-3493	CBI643395	T	F	F	F	F	F	T	F	F	P	3	
284471500	OA90-3495	CBI771145	T	F	F	F	F	F	T	F	F	P	3	
284471500	OA90-3497	CBI173400	T	F	F	F	F	F	T	F	F	P	3	
284471500	OA90-3499	CBI293814	T	F	F	F	F	F	T	F	F	P	3	
284471500	OA90-36922	CBI76506	T	F	F	F	F	F	T	F	F	P	3	
284471500	OA90-4634	CBI888068	T	F	F	F	F	F	T	F	F	P	3	
284472100	OA90-12508	CBI361586	T	F	F	F	F	F	T	F	F	P	3	
284472100	OA90-14677	CBI87464.	T	F	F	F	F	F	T	F	F	P	3	
284472100	OA90-14730	CBI703539	T	F	F	F	F	F	T	F	F	P	3	
284472100	OA90-14734	CBI28302	T	F	F	F	F	F	T	F	F	P	3	
284472100	OA90-16226	CBI658555	T	F	F	F	F	F	T	F	F	P	3	
284472100	OA90-21410	CBI380958	T	F	F	F	F	F	T	F	F	P	3	
284472100	OA90-25841	CBI119009	T	F	F	F	F	F	T	F	F	P	3	
284472100	OA90-3503	CBI65662	T	F	F	F	F	F	T	F	F	P	3	
284472100	OA90-3505	CBI474267	T	F	F	F	F	F	T	F	F	P	3	
284472100	OA90-36930	CBI687078	T	F	F	F	F	F	T	F	F	P	3	
284472100	OA90-6920	CBI829192	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-10508	CBI883236	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-11897	CBI192169	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-11916	CBI270222	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-11984	CBI491325	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-12012	CBI417644	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-13178	CBI55610	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-13192	CBI664689	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-13202	CBI991916	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-13206	CBI302245	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-1583	CBI698756	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-2011	CBI411619	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-2033	CBI788133	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-2090	CBI545187	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-21443	CBI786231	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-2167	CBI394009	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-2651	CBI568705	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-30652	CBI497849	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-30689	CBI921212	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-30766	CBI858726	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-33514	CBI497887	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-35529	CBI22596	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-37756	CBI424793	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-37767	CBI275843	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-38556	CBI841347	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-39047	CBI895579	T	F	F	F	F	F	T	F	F	P	3	

Appendix B  
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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284473100	OA90-39055	CBI847013	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-4785	CBI909661	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-4822	CBI232907	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-5876	CBI868130	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-7451	CBI862811	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-7857	CBI255956	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-7964	CBI352481	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-8785	CBI115203	T	F	F	F	F	F	T	F	F	P	3	
284473100	OA90-9574	CBI136780	T	F	F	F	F	F	T	F	F	P	3	
284473100	RAD01701	Aerosol Antiperspirant	T	F	F	F	F	F	T	F	F	P	3	
284473100	RAD01801	Personal Spray Deodorant	T	F	F	F	F	F	T	F	F	P	3	
284473100	RAD01802	Personal Spray Deodorant	T	F	F	F	F	F	T	F	F	P	3	
284473100	RAD01803	Personal Spray Deodorant	T	F	F	F	F	F	T	F	F	P	3	
284473100	RAD01804	Personal Spray Deodorant	T	F	F	F	F	F	T	F	F	P	3	
284473100	RAD03101	Disinfectant/Deodorant Spray	T	F	F	F	F	F	T	F	F	P	3	
284473100	RAD03102	Disinfectant/Deodorant Spray	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-10511	CBI224840	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-12047	CBI854495	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-12325	CBI79486	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-12337	CBI230868	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-12350	CBI241219	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-12400	CBI659666	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-12654	CBI152840	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-14674	CBI971584	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-14689	CBI77167	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-14693	CBI880141	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-16260	CBI903496	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-19994	CBI211645	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-20664	CBI311579	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-21112	CBI258255	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-21432	CBI594688	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-21439	CBI139598	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-26301	CBI951837	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-30809	CBI199677	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-31650	CBI182490	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-3571	CBI249911	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-3681	CBI132519	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-39059	CBI842724	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-43221	CBI851543	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-5492	CBI818406	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-7448	CBI491836	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-8742	CBI728470	T	F	F	F	F	F	T	F	F	P	3	
284473500	OA90-8776	CBI434276	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-12451	CBI865844	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-12694	CBI428791	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-13324	CBI462156	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-14656	CBI671818	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-14680	CBI950443	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-14701	CBI775411	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-14942	CBI811792	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-15007	CBI218034	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-18451	CBI226686	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-18456	CBI650919	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-1988	CBI983517	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-21269	CBI342377	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-2129	CBI250570	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-21337	CBI841195	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-21358	CBI256412	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-22609	CBI546502	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-22614	CBI622326	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-25826	CBI751691	T	F	F	F	F	F	T	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284474100	OA90-25830	CBI265235	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-25946	CBI934091	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-25961	CBI501887	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-25966	CBI591073	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-25971	CBI514769	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-25976	CBI509711	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-25982	CBI876178	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-30657	CBI275127	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-30680	CBI590729	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-30692	CBI19050.	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-30710	CBI992229	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-30749	CBI90994	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-30755	CBI233386	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-30774	CBI702122	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-30781	CBI676758	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-30790	CBI915417	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-33106	CBI607244	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-33115	CBI423844	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-36935	CBI771333	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-36946	CBI840168	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-36975	CBI92672	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-36986	CBI386912	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-37008	CBI185775	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-37669	CBI209519	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-39103	CBI105277	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-39141	CBI833340	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-39146	CBI57366	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-42652	CBI139150	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-43613	CBI256591	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-43620	CBI16979	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-43625	CBI866573	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-4675	CBI181907	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-5623	CBI61417	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-5750	CBI815691	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-5951	CBI368724	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-5956	CBI96800.	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-5971	CBI748295	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-5982	CBI906234	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-6021	CBI453457	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-6033	CBI152779	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-6071	CBI767182	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-6076	CBI225989	T	F	F	F	F	F	T	F	F	P	3	
284474100	OA90-7263	CBI696718	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-12683	CBI30877	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-13315	CBI896535	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-18441	CBI827495	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-18448	CBI629255	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-19226	CBI953013	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-19813	CBI286383	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-19992	CBI372658	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-21249	CBI666310	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-25844	CBI957624	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-2625	CBI306231	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-30667	CBI884613	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-30672	CBI338077	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-30725	CBI283139	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-30729	CBI406468	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-33118	CBI800754	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-36917	CBI631479	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-41780	CBI252298	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-42530	CBI779573	T	F	F	F	F	F	T	F	F	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284474500	OA90-42544	CBI370914	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-42546	CBI507403	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-42550	CBI697378	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-42555	CBI351974	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-42558	CBI888617	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-42570	CBI827953	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-4679	CBI188587	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-5631	CBI684149	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-5634	CBI159937	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-6486	CBI714588	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-6492	CBI841795	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-6494	CBI362866	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-9904	CBI460204	T	F	F	F	F	F	T	F	F	P	3	
284474500	OA90-9910	CBI675542	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-10630	CBI973530	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-12458	CBI260187	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-12685	CBI168962	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-18443	CBI27989	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-21333	CBI68137	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-21369	CBI667486	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-24156	CBI304039	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-25846	CBI661737	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-25922	CBI91739	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-26318	CBI170776	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-30662	CBI436646	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-30685	CBI741065	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-39152	CBI998932	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-41518	CBI72362	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-41522	CBI422810	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-5627	CBI499679	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-5926	CBI947912	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-5931	CBI796280	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-9907	CBI323441	T	F	F	F	F	F	T	F	F	P	3	
284475100	OA90-9913	CBI796699	T	F	F	F	F	F	T	F	F	P	3	
284475500	OA90-6465	CBI586520	T	F	F	F	F	F	T	F	F	P	3	
284475500	OA90-6467	CBI810818	T	F	F	F	F	F	T	F	F	P	3	
284475500	OA90-6469	CBI726144	T	F	F	F	F	F	T	F	F	P	3	
284476500	OA90-13939	CBI809948	T	F	F	F	F	F	T	F	F	P	3	
284476500	OA90-13969	CBI3328	T	F	F	F	F	F	T	F	F	P	3	
284476500	OA90-13979	CBI163606	T	F	F	F	F	F	T	F	F	P	3	
284476500	OA90-6137	CBI764170	T	F	F	F	F	F	T	F	F	P	3	
284476500	OA90-865	CBI734081	T	F	F	F	F	F	T	F	F	P	3	
284476500	OA90-9481	CBI239928	T	F	F	F	F	F	T	F	F	P	3	
284477100	OA90-12752	CBI775470	T	F	F	F	F	F	T	F	F	P	2	3
284477100	OA90-14642	CBI62510	T	F	F	F	F	F	T	F	F	P	2	3
284477100	OA90-14645	CBI327589	T	F	F	F	F	F	T	F	F	P	2	3
284477100	OA90-3142	CBI437525	T	F	F	F	F	F	T	F	F	P	2	3
284477100	OA90-3145	CBI103711	T	F	F	F	F	F	T	F	F	P	2	3
284477100	OA90-3148	CBI663389	T	F	F	F	F	F	T	F	F	P	2	3
284477100	OA90-37673	CBI857450	T	F	F	F	F	F	T	F	F	P	2	3
284477100	OA90-37690	CBI911663	T	F	F	F	F	F	T	F	F	P	2	3
284477500	OA90-17664	CBI816506	T	T	T	T	F	F	T	F	F	P	3	
284477500	OA90-19288	CBI950214	T	T	T	T	T	T	T	T	T	P	3	
284477500	OA90-19836	CBI936677	T	T	T	T	T	T	T	T	T	P	3	
284477500	OA90-24609	CBI340052	T	T	T	T	T	T	T	T	T	P	3	
284477500	OA90-24612	CBI138493	T	T	T	T	T	T	T	T	T	P	3	
284477500	OA90-24614	CBI566427	T	T	T	T	F	F	T	F	F	P	3	
284477500	OA90-24617	CBI529137	T	T	T	T	F	F	T	F	F	P	3	
284477500	OA90-24620	CBI584198	T	T	T	T	T	T	T	T	T	P	3	
284477500	OA90-24623	CBI324850	T	T	T	T	F	F	T	F	F	P	3	
284477500	OA90-24625	CBI11107	T	T	T	T	F	F	T	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284477500	OA90-24627	CBI935004	T	T	T	T	F	F	T	F	F	P	3	
284477500	OA90-24630	CBI712309	T	T	T	T	F	F	T	F	F	P	3	
284477500	OA90-24635	CBI160270	T	T	T	T	F	F	T	F	F	P	3	
284477500	OA90-2474	CBI341270	T	T	T	T	F	T	T	T	T	P	3	
284478100	OA90-12428	CBI9038.	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-12447	CBI566985	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-12475	CBI885522	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-12478	CBI556309	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-12604	CBI249972	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-12728	CBI368440	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-12748	CBI300599	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-14792	CBI173151	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-14794	CBI451193	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-14807	CBI47533	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-14954	CBI547113	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-16234	CBI932314	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-16252	CBI665981	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-30721	CBI860855	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-3694	CBI532496	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-3697	CBI315943	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-4010	CBI173545	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-43970	CBI344564	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-4777	CBI863975	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-5521	CBI87293	T	F	F	F	F	F	T	F	F	P	3	
284478100	OA90-6911	CBI45611.	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-12422	CBI655611	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-12595	CBI321577	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-12726	CBI58502	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-12744	CBI589654	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-12804	CBI909517	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-13952	CBI744494	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-14789	CBI889868	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-14804	CBI376127	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-15016	CBI985800	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-16224	CBI952010	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-16280	CBI321187	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-16288	CBI185147	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-17722	CBI348215	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-19228	CBI728559	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-19240	CBI666060	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-19244	CBI897398	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-19850	CBI133851	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-19856	CBI387115	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-2029	CBI659264	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-20428	CBI52863	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-20436	CBI690989	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-20444	CBI361301	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-2104	CBI361782	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-21089	CBI933598	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-21091	CBI612654	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-22846	CBI467217	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-2418	CBI917385	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-2584	CBI363521	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-30727	CBI28192	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-30734	CBI379376	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-30736	CBI143084	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-30744	CBI641042	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-30779	CBI100603	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-33577	CBI941789	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-33579	CBI739622	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-34451	CBI706700	T	F	F	F	F	F	T	F	F	P	3	

Appendix B  
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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
284479500	OA90-34453	CBI726021	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-34456	CBI367755	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-34458	CBI94115	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-34461	CBI877989	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-37006	CBI566861	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-38628	CBI266670	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-38994	CBI408012	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-38996	CBI558783	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-39022	CBI5209	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-4014	CBI651243	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-41701	CBI671730	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-43515	CBI90906	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-43943	CBI301502	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-4642	CBI793235	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-4650	CBI271786	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-4653	CBI170349	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-4687	CBI682703	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-4712	CBI642105	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-4718	CBI688193	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-5754	CBI924638	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-6504	CBI321205	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-6908	CBI247994	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-6913	CBI615000	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-6924	CBI590195	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-6926	CBI874998	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-6969	CBI936994	T	F	F	F	F	F	T	F	F	P	3	
284479500	OA90-8793	CBI950025	T	F	F	F	F	F	T	F	F	P	3	
285100000	OA90-25021	CBI501679	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25025	CBI331433	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25027	CBI661485	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25029	CBI793586	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25032	CBI637539	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25035	CBI102046	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25040	CBI862601	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25042	CBI911973	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25044	CBI452764	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25047	CBI897221	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25050	CBI717550	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25053	CBI7967	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25056	CBI23844	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-25808	CBI107770	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-33937	CBI866370	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-34040	CBI801788	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-34795	CBI915728	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35196	CBI528393	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35198	CBI67318	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35258	CBI755251	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35628	CBI184145	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35630	CBI556029	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35633	CBI158100	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35636	CBI934393	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35639	CBI426843	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35642	CBI183717	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35645	CBI935221	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35648	CBI672775	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35651	CBI309250	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35654	CBI77106	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35659	CBI689474	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35662	CBI30223	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35677	CBI787322	T	T	T	T	T	T	T	F	P	3		
285100000	OA90-35680	CBI92420	T	T	T	T	T	T	T	F	P	3		

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285100000	OA90-35683	CBI425090	T	T	T	T	T	T	T	T	F	P	3	
285100000	OA90-35685	CBI926325	T	T	T	T	T	T	T	T	F	P	3	
285100000	OA90-35687	CBI300010	T	T	T	T	T	T	T	T	F	P	3	
285100000	OA90-4618	CBI997673	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-16103	CBI883119	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-18228	CBI323172	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-21233	CBI456714	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-25064	CBI222429	F	F	F	F	F	F	F	F	F	P	3	
285110000	OA90-25096	CBI699507	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-25806	CBI974024	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-25810	CBI360377	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-25812	CBI805572	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-26186	CBI389424	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-26189	CBI528800	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-26191	CBI602776	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-26193	CBI464545	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-34029	CBI295222	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-34683	CBI155430	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-36339	CBI921638	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-36416	CBI733480	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-36424	CBI694154	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-36444	CBI855483	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-36459	CBI374165	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-39575	CBI207516	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-43087	CBI394531	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-435	CBI611684	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-774	CBI980001	T	T	T	T	T	T	T	T	F	P	3	
285110000	OA90-8387	CBI260287	T	T	T	T	T	T	T	T	F	P	3	
285112500	IA000233	Rust Oleum Metal Primer	T	T	T	T	T	T	T	T	F	P	3	
285112500	IA000915	White Pigmented Kilz	T	T	T	T	T	T	T	T	T	P	3	
285113700	IA000009	Thompson's Water Sealant (aerosol)	F	F	F	F	F	F	F	F	F	P	3	
285113700	IA000014	Woodlife Preservative	F	F	F	F	F	F	F	F	F	P	3	
285113700	IA000015	Thompson's Water Sealant (liquid)	F	F	F	F	F	F	F	F	F	P	3	
285113700	IA000247	Champion Redwood Stain (aerosol)	F	F	F	F	F	F	F	F	F	P	3	
285113700	IA000381	Thompson's Water Sealant	F	F	F	F	F	F	F	F	F	P	3	
285113700	IA000382	Hydrostop	F	F	F	F	F	F	F	F	F	P	3	
285113700	IA000680	Thompson's Water Sealant	F	F	F	F	F	F	F	F	F	P	3	
285113700	IA000682	Seal Treat	F	F	F	F	F	F	F	F	F	P	3	
285113700	IA000770	Redwood Stain	F	F	F	F	F	F	F	F	F	P	3	
285113700	IA000829	Thompson's Water Sealant	F	F	F	F	F	F	F	F	F	P	3	
285113700	IA000940	NYBCO Redwood Stain	F	F	F	F	F	F	F	F	F	P	3	
285113700	IA000986	Thompson's Water Sealant	F	F	F	F	F	F	F	F	F	P	3	
285113700	IA001081	Behr Patio Redwood Stain	F	F	F	F	F	F	F	F	F	P	3	
285113700	OA90-16148	CBI118523	T	T	T	T	T	T	T	T	F	P	3	
285113700	OA90-25108	CBI702346	T	T	T	T	T	T	T	T	F	P	3	
285113700	OA90-25820	CBI270316	T	T	T	T	T	T	T	T	F	P	3	
285113700	OA90-29917	CBI425008	T	T	T	T	T	T	T	T	F	P	3	
285113700	OA90-9799	CBI331050	T	T	T	T	T	T	T	T	F	P	3	
285114100	N0401001	latex house paint w/ everflex bg	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401002	latex house paint w/ everflex bg	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401003	latex house paint w/ h.b. fuller sb-109	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401004	acrylic emulsion paint w/ rhoplex ac-64	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401005	exterior acrylic flat	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401006	exterior acrylic latex paint	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401007	exterior flat formula w/ rhoplex ac-829	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401008	exterior flat formula w/ rhoplex ac-829	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401009	exterior flat paint e 13998	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401010	exterior house paint	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401011	exterior house paint - acrylic	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401012	exterior house paint - evac	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401013	exterior house paint - evac polywet nd-	F	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285114100	N0401014	exterior house paint - evac polywet nd-	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401015	exterior latex flat paint w/ 76 res 307	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401016	exterior latex house paint w/busan 11-m	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401017	exterior latex house paint w/busan 11-m	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401018	exterior paint based on polyco 2151	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401019	flat exterior house paint	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401020	exter. flat house paint w/ rhoplex ac-6	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401021	exter. house paint w/ wallpol 40-136	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401022	exter. alkyd-modif.paint w/wallpol40-14	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401023	latex trim paint modif. w/ ws-220t resi	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401024	premium latex exter. flat w/ 76 res 651	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401025	28 pvc exterior acrylic g-69007	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401026	28 pvc exterior acrylic g-69008	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401027	28 pvc exterior acrylic g-69009	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0401028	exter. house paint w/ZnO2 & 76 res 3077	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0402001	acrylic house paint w/alkyd mod.tintbas	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0402002	5542 emulsif.alkyd tint base house pain	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0402003	alkyd modified latex house paint	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0402004	exterior acrylic latex tint base	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0402005	exter. deeptone tint base formulation	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0402006	exter. latex house paint w/wallpo 40-12	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0402007	exter. tint base form. w/ rhoplex ac-82	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0402008	exterior light tint base	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0402009	exterior tintable white emulsion paint	F	F	F	F	F	F	F	F	F	P	3	
285114100	N0402010	exterior tint base	F	F	F	F	F	F	F	F	F	P	3	
285114400	N0422001	acrylic latex all-surface exter. primer	F	F	F	F	F	F	F	F	F	P	3	
285114400	N0422002	alkyd modified exterior wood primer	F	F	F	F	F	F	F	F	F	P	3	
285114400	N0422003	exterior stain resistant vinyl primer	F	F	F	F	F	F	F	F	F	P	3	
285114400	N0422004	exterior white primer	F	F	F	F	F	F	F	F	F	P	3	
285114400	N0422005	exterior wood primer	F	F	F	F	F	F	F	F	F	P	3	
285114400	N0422007	house paint primer	F	F	F	F	F	F	F	F	F	P	3	
285114400	N0422015	PVC exterior hardboard primer	F	F	F	F	F	F	F	F	F	P	3	
285114400	N0422016	PVC waterborne pigmented primer	F	F	F	F	F	F	F	F	F	P	3	
285114900	N0424007	exter.red iron oxide acrylic latex stai	F	F	F	F	F	F	F	F	F	P	3	
285114900	N0424008	exterior water-based stain for wood	F	F	F	F	F	F	F	F	F	P	3	
285116900	DFEPTA1B	Alkyd Semi-Gloss Paint	T	T	T	T	T	T	T	T	T	F	P	3
285116900	DFEPTA2B	Alkyd Semi-Gloss Paint	T	T	T	T	T	T	T	T	T	F	P	3
285117100	DFEPTA1A	Alkyd Primer	T	T	T	T	T	T	T	T	T	F	P	3
285117100	DFEPTA2A	Alkyd Primer	T	T	T	T	T	T	T	T	T	F	P	3
285117100	IA000231	Purple Primer	T	T	T	T	T	T	T	T	T	F	P	3
285117100	IA000232	Rust Oleum Hunter Green	T	T	T	T	T	T	T	T	T	F	P	3
285117100	IA000234	Pryme Wood Lightener	T	T	T	T	T	T	T	T	T	F	P	3
285117100	IA000462	Jasco Paint Etch	T	T	T	T	T	T	T	T	T	F	P	3
285117100	IA000933	1st Step Before Repair (primer)	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000242	Minwax Spar Urethane (aerosol)	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000243	Liquid Plastic (aerosol)	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000244	Home & Marine Super Spar (aerosol)	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000246	Last n Last Clear Satin (aerosol)	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000248	Polyurethane Liq. Plastic	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000250	Danish Oil Finish	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000262	Polyurethane Clear Satin	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000263	Antique Oil Finish	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000264	CWF Clear Wood Finish	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000266	Glid-Tone Wood Finish	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000267	Clear Finish Soft Sheen	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000467	Duro Fame	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000469	Varathane Satin	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000470	Kenco Urethane Varnish	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000471	Defl Clear Wood Finish	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000473	Man O'War Varnish	T	T	T	T	T	T	T	T	T	F	P	3
285117500	IA000474	Man O' War Varnish	T	T	T	T	T	T	T	T	T	F	P	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285117500	IA000629	Polyurethane Varnish (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000630	Super Spar Stain/Varnish	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000633	Defthane Polyurethane (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000634	Deft Danish Oil Finish (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000636	Polyurethane Varnish (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000637	Minwax Spar Urethane (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000638	Interior Wood Finish (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000639	Polyurethane Wood Finish (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000640	Zip Guard Wood Finish (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000766	Handy Dan Wood Varnish (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000767	Polyurethane Varnish (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000768	Polyurethane Clear Varnish (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000769	Deft Clear Wood Finish (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000771	Minwax Antique Oil Finish	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000934	Polyurethane Varnish	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000937	Pen Thane Wood Finish	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000938	Red Devil Polyurethane	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA000939	Illinois Bronze Varnish	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA001080	Super Spar Varnish/Stain	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA001082	Behr Stain & Sealer	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA001085	Polyurethane Varnish	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA001310	Polyurethane one-part	T	T	T	T	T	T	T	T	F	P	3	
285117500	IA001311	Polyurethane two-part	T	T	T	T	T	T	T	T	F	P	3	
285117700	IA000249	Natural Wood Stain	T	T	T	T	T	T	T	T	F	P	3	
285117700	IA000251	Color Rich Wood Stain	T	T	T	T	T	T	T	T	F	P	3	
285117700	IA000255	Polyshades	T	T	T	T	T	T	T	T	F	P	3	
285117700	IA000256	Formby's Wiping Stain	T	T	T	T	T	T	T	T	F	P	3	
285117700	IA000631	Liquid Plastic Stain/Varnish (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117700	IA000632	Varathan Oil Finish Stain/Varn(aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285117700	IA000772	Minwax Finishing Wax	T	T	T	T	T	T	T	T	F	P	3	
285117700	IA001078	Varthane Stain/Varnish	T	T	T	T	T	T	T	T	F	P	3	
285117700	IA001079	Kamar Varnish/Stain	T	T	T	T	T	T	T	T	F	P	3	
285117700	IA001083	Behr Clear Gloss Stain/Varnish	T	T	T	T	T	T	T	T	F	P	3	
285117700	IA001084	Clear Lac Stain & Lacquer	T	T	T	T	T	T	T	T	F	P	3	
285118100	DFEPTAX01	Latex Flat Paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	DFEPTAX06	Latex Flat Paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	DFEPTAX09	Latex Flat Paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	DFEPTAX10	Latex Flat Paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	DFEPTL5B	Latex Primer	T	T	T	T	T	T	T	T	F	P	3	
285118100	DFEPTL6B	Latex Flat Paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410001	contractor grade interior flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410002	economical interior flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410003	economy wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410005	federal spec. latex interior flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410006	flat interior latex emulsion paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410007	good quality flat latex formulation	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410008	good quality flat wall paint formulatio	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410009	hi-cost,hi-qual vinyl-acrylic inter fla	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410010	high hiding thixotropic inter flat pain	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410011	high quality acrylic flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410012	high quality interior flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410013	high quality interior flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410014	high quality interior flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410015	high quality interior flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410016	high qual interior latex flat wall pain	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410017	high-scrub "child-proof" wall finishes	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410018	interior acrylic latex flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410019	interior acrylic latex flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410020	interior acrylic latex flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410021	interior flat	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410022	interior flat - acrylic	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285118100	N0410023	interior flat latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410024	interior flat - pvac	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410025	interior flat - pvac	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410026	interior flat - pvc	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410027	interior flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410028	interior flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410029	interior flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410030	interior flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410031	interior thixotropic latex wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410032	interior vinyl acrylic latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410033	interior vinyl acrylic latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410034	interior vinyl acrylic latex flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410035	interior vinyl acrylic latex flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410036	interior vinyl acrylic latex flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410037	interior vinyl acrylic latex flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410038	international latex flat formula	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410039	international latex wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410040	latex ceiling flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410041	low cost contractor latex flat	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410042	low cost flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410043	low cost interior flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410047	low cost interior flat	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410048	low cost interior flat	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410049	low cost wall paint made w/ 76 res 3077	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410050	medium quality interior flat	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410051	premium quality flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410052	prototype interior flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410053	70 pvc acetate/acrylic wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410054	45% pvc flat latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410055	70 pvc interior flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410056	pvc interior latex flat	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410057	65 pvc latex flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410058	52 pvc latex flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410059	52 pvc latex flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410060	55 pvc latex flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410061	pva flat wall paint (low cost)	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410062	50% pvc/pvac/acrylic flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410063	60 pvc white latex wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410064	quality flat wall paint formulation	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410065	quality interior flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410066	xp-13-27 vinyl acrylic interior flat	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410067	vinyl acrylic interior flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410068	vinyl acrylic interior wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410080	no. 1502: 1 coat hiding,lo sheen,lo cos	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410081	no. 2109: low cost, touch-up, low sheen	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410082	no. 2811: int/ext, hi hiding, durabilit	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410083	no. 3118: 1 coat hiding,touch-up,lo cos	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410084	no. 3523: 1 coat hiding, good burnishin	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0410085	no. 4298: 1 coat hiding, min. wet to dr	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411001	clear tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411002	economy tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411003	flat wall tint paint pastel tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411004	interior dark tint base w/ 76 res 3077	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411005	interior flat tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411006	interior flat tint base cf-35	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411007	interior latex paint-tint base no. 1	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411008	interior medium tint base w/ 76 res 307	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411010	interior tint base latex flat 1795-138b	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411011	interior vinyl acrylic flat - deep tint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411012	lo cost inter. flat vinyl acrylic latex	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411013	low cost tint base	T	T	T	T	T	T	T	T	F	P	3	

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285118100	N0411014	tint base interior	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411015	56-74c vinyl-acrylic flat colortrend	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0411016	56-75ak vinyl-acrylic flat colortrend	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412001	acrylic interior flat white	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412002	acrylic interior flat white	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412003	acrylic interior flat white	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412005	contractor white flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412006	good quality flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412007	hi hide interior flat white latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412008	hi hide interior flat white latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412009	high pvc interior flat white latex pain	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412010	hi-hide white flat 76 res 3077	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412011	interior flat white c-143a	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412012	interior flat white latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412013	interior flat white latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412014	interior flat white vinyl acetate latex	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412017	low cost ceiling white latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412018	low-cost interior white flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412019	medium quality white interior flat	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412020	polyvinyl acetate interior flat white	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412021	polyvinyl acetate interior flat white	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412022	polyvinyl acetate interior flat white	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412023	polyvinyl acetate interior flat white	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412024	premium qual interior flat white latex	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412025	premium qual interior flat white latex	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412026	premium qual interior flat white latex	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412027	premium qual interior flat white latex	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412028	quality white ceiling flat latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412029	white hi build interior latex flat pain	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412030	white interior flat wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412031	white interior latex flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412032	white interior latex flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0412033	white interior latex flat paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413001	inter. flat wall paint white/light tint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413002	interior flat white and light tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413003	interior flat white and light tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413004	interior low cost white & light tint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413005	interior one coat white and light tint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413006	interior quality white and light tint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413007	interior white and light tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413008	interior white and light tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413009	interior white and light tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413010	interior white and light tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413011	interior white & light tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413012	interior white and light tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413013	interior white and tint base paint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413014	interior white and tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413015	interior white and tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413016	no-drip white and light tint	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0413017	pvc interior white & light tint base	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0416005	interior flat green 352	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0416006	polyvinyl acetate paint (interior blue)	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0417001	acrylic enamel no. 5	T	T	T	T	T	T	T	T	F	P	3	
285118100	N0426015	white interior-exterior house paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	DFEPTL3B	Latex Semi-Gloss Paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	DFEPTL4B	Latex Semi-Gloss Paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414001	high quality interior semi-gloss paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414002	high quality interior semi-gloss paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414003	high quality interior semi-gloss paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414004	high quality interior semi-gloss paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414005	interior economy semi-gloss paint	T	T	T	T	T	T	T	T	F	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285118300	N0414006	interior semi-gloss formulation	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414007	interior semi-gloss formulation	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414008	interior semi-gloss	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414009	interior semi-gloss white paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414010	interior semi-gloss white paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414011	interior semi-gloss white paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414012	interior semi-gloss white paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414013	interior semi-gloss white paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414014	interior semi-gloss	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414015	interior semi-gloss	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414016	interior semi-gloss	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414017	interior semi-gloss	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414018	interior semi-gloss	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414019	low-cost semi-gloss white enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414020	medium gloss white enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414021	medium priced interior semi-gloss	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414022	moderate quality interior semi-gloss	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414023	water reducible air-dry enamels	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414024	semigloss interior white paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414025	semi-gloss white enamel formulation	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414026	semi-gloss white enamel formulation	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414027	semi-gloss white enamel formulation	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414028	semi-gloss white enamel formulation	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414029	semi-gloss white enamel formulation	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414030	vinyl acrylic interior semi-gloss	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414031	white interior latex semi-gloss enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0414032	white interior latex semi-gloss enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0415001	acrylic enamel no. 3	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0415002	interior semi-gloss latex tint base	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0415003	interior semi-gloss tint base	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0415004	44-502 interior semi-gloss tint base	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0415005	semi-gloss deep-base enamel (i-2015)	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0415006	semi-gloss deep-base enamel (i-2014)	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0415007	semi-gloss deep-base enamel (i-2016)	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0416001	acrylic paint (interior blue)	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0416002	acrylic paint (interior blue)	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0416003	butadiene-styrene paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0416004	gray epoxy modified latex floor paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0417002	egg shell enamel using 76 res 3077	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0417003	eggshell enamel with 76 res 3077	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0417004	eggshell white enamel form. sugg. i-200	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0417005	#85-4 hi qual pva latex eggshell enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0417006	interior eggshell latex enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0417007	interior satin finish white latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0417008	interior satin water-borne varnish	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0417009	prem qual white eggshell wall paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0417010	tintable eggshell enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0417011	white sheen paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419003	gray porch/deck enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419004	green water-reducible alkyd enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419005	hi gloss interior/exterior black enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419006	red iron oxide acrylic latex flr enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419007	water reducible air-dry enamels	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419008	water reducible air-dry enamels	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419009	water reducible air-dry enamels	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419010	water reducible air-dry enamels	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419011	water reducible air-dry enamels	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419012	water reducible air-dry enamels	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419013	water reducible air-dry enamels	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419014	water reducible air-dry enamels	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0419015	yellow vinyl-acrylic flat accent base	T	T	T	T	T	T	T	T	F	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285118300	N0420001	economy high gloss acrylic enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420004	gloss black enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420005	gloss black formulation	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420006	gloss deeptone blue formulation	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420007	gloss green enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420008	gloss white and lt. tint base	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420009	gloss white enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420010	gloss white enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420011	gloss white enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420012	gloss white enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420013	gloss white enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420014	gloss white enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420015	gloss white enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420016	gloss white enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420017	gloss white latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420018	gloss white latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420019	hard resin modified gloss enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420020	hard resin modified gloss enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420021	high gloss brown enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420022	high gloss latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420023	high quality PVA latex gloss enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420024	interior gloss, white latex	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420025	interior gloss formulation (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420026	interior high gloss latex	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420027	interior high gloss latex	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420028	interior high gloss latex enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420029	latex gloss paint formulation	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420031	premium white acrylic latex	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420032	quality high gloss interior latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420033	quality interior/exterior white gloss	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420034	texigel 23-555 with titanium dioxide	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420035	xp-13-28 vinyl acrylic gloss paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420037	white high gloss enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420038	white high gloss water-reducible enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420040	white high-gloss water-reducible enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420041	white high-gloss water-reducible enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0420042	white interior gloss paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423001	high quality semi-gloss latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423002	interior/exterior semi-gloss white late	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423003	interior semi-gloss paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423004	low cost semi-gloss paing	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423005	lower cost PVA latex semi-gloss	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423006	medium cost PVA latex semi-gloss	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423007	semi-gloss latex white paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423008	semi-gloss paint with amSCO res 3077	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423009	semigloss PVA paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423010	semi-gloss white	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423011	semi-gloss white latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423012	semi-gloss white latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423013	semi-gloss white latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423014	semi-gloss white paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423015	van gel B in semi-gloss latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423016	van gel B in semi-gloss latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423017	van-gel B in semi-gloss latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423018	white semi-gloss enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423019	white semi-gloss latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0423020	white semi-gloss latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425002	high gloss interior/exterior white enam	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425003	water reducible air-dry topcoats	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425004	water reducible air-dry topcoats	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425005	water reducible air-dry topcoats	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285118300	N0425006	water reducible air-dry topcoats	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425007	water reducible air-dry topcoats	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425008	water reducible air-dry topcoats	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425009	water reducible air-dry topcoats	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425010	water reducible air-dry topcoats	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425011	water reducible air-dry topcoats	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425012	water reducible air-dry topcoats	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425013	water reducible architectural coatings	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425015	white enamel formulation roller	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0425016	white enamel formulation spray	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0426003	fast air drying acrylic emulsion enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0426009	water reducible, air dry enamel	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0426013	water-soluble enamel formulation	T	T	T	T	T	T	T	T	F	P	3	
285118300	N0426014	water-soluble enamel formulation	T	T	T	T	T	T	T	T	F	P	3	
285118600	DFEPTL3A	Latex Primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	DFEPTL4A	Latex Primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	DFEPTL5A	Latex Primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	DFEPTL6A	Latex Primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422006	high quality stain blocking primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422008	interior latex primer-sealer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422009	latex primer sealer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422010	latex stain blocking primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422011	latex undercoat	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422012	primer and sealer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422013	primer based on rhoplex	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422014	primer formulation	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422017	PVC primer formulation	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422018	stain blocking primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422019	staining wood resistant primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422020	styrene acrylic latex primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422021	tannin stain-blocking wood primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422022	vinyl/acrylic primer sealer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422023	water reducible air dry primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422024	water reducible alkyd primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422025	water reducible epoxy primer	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422026	wood primer-nonstaining woods	T	T	T	T	T	T	T	T	F	P	3	
285118600	N0422027	wood primers-nonstaining woods	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0412004	cee-5 epoxy ester emulsion-synth. latex	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0418001	grey textured finish	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0418002	interior texture paint	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0418003	k1a112 interior texture paint	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0418004	non-fibrated latex texture paint	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0418005	PYRAX WA in acrylic latex texture paint	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0418006	stipple and texture compound	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0418007	2022-32-3 texture coating	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0418008	texture coating based on 40-424 & 40-42	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0421001	intumescent fire retardant paint	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0421002	intumescent fire retardant paint	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0421003	intumescent interior flat coating	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0421004	intumescent white interior latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424001	alkyd modified opaque redwood stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424002	alkyd modified semi-transparent stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424003	brown stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424004	cherry penetrating latex stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424005	desert tan latex stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424006	economical redwood stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424009	gold stain with 76 res 3077	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424010	green stain with 76 res 3077	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424015	maple stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424017	opaque stain-clear base	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424018	opaque stain-white base high sheen	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285118800	N0424019	opaque stain-white base low sheen	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424020	penetrating latex stain tint base	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424021	redwood latex solid stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424022	redwood penetrating latex stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424023	redwood stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424024	red stain with 76 res 3077	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424025	semi-transparent redwood stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424031	semi-transparent stain-tint base	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424033	spanish red latex stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424034	tint base for semi-transparent stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424035	transparent stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424036	walnut penetrating latex stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424037	water reducible stain	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424038	water reducible stains	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424039	wood stain base yellow	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424040	wood stain-tint base	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0424041	wood stain-tint base	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0426001	ethylene vinyl acetate latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0426002	ethylene vinyl acetate latex paint	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0426004	latex two coat white	T	T	T	T	T	T	T	T	F	P	3	
285118800	N0426005	vinyl-acrylic latex comparison formulat	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202001	clear overprint varnish-I (acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202002	clear overprint varnish-II(acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202003	clear overprint varnish-3 (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202004	clear overprint varnish-IV(acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202005	clear overprint varnish (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202006	clear overprint varnish (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202007	clear overprint varnish-I (acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202008	clear overprint varnish-II(acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202009	clear overprint varnish-3 (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202010	Jonwax 26	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202011	Jonwax 22	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202012	clear overprint aqueous varnish-#1	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202013	clear overprint aqueous varnish-#2	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202014	economical overprint varnish (acrylics)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202015	economical overprint varnish (acrylics)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202016	gen'l scuff resistant overvarnish(resin	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202017	gen'l scuff resistant overvarnish(resin	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202018	gloss overprint (FDA)(acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202019	high gloss OPV (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202020	glossy, hi-slip coating (acrylics)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202021	fast curing clear overprint (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202022	grease-barrier overprint (resin/cap)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202023	grease-barrier overprint (CAP)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202024	CAP overprint (CAP)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202025	high gloss overvarnish (resin)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202026	high slip overprint varnish(acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202027	multiwall bag overprint varnish(acrylic)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202028	hi solids varnish-flexo&gravure(acrylic)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202029	hi solids varnish-flexo&gravure(acrylic)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202030	water-reducible overprint varn.(acrylic)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202031	overprint (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202032	overprint (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202033	overprint varnish (acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202034	overprint (oligomer/CHA/TEGDA)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202035	overprint (TEGDA/oligomer/acrylate)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202036	overprint (IBMA/oligomer)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202037	overprint coating-rub formula (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202038	overprint coating-rub formula (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202039	overprint coating-gloss (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202040	overprint coating-high gloss (acrylics)	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285126700	N0202041	clear overprint varnish (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202042	overprint/primer-metalized paper & film	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202043	high gloss overprint-treated PE(acrylic	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202044	overprint varnish-alkali resistant(acry	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202045	overprint varnish-H2O resistant(acrylic	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202046	overprint varnish-A (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202047	overprint varnish-B (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202048	overprint varnish-C (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202049	varnish (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202050	heat resistant overprint varnish(acryl)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202051	overprint varnish-pigmented I (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202052	overprint varnish-pigmented III(acrylic	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202053	overprint varnish-pigmented II (acrylic	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202054	recommended extender (acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202055	overprint varnish-pigmented (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202056	overprint varnish-pigmented I (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202057	overprint varnish-pigmented II (acrylic	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202058	overprint varnish-pigmented III(acrylic	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202059	preparat. of neutralized varnish (resin	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202060	overprint varnish-wet block resistant	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202061	pre-print liner overvarnish (vehicle)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202062	thermoset overprint (resin/CAP)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202063	thermoset overprint (resin/CAP)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202064	thermoset overprint (resin/CAP)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202065	varnish formulation (resin)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202066	varnish formulation (resin)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202067	clear overprint varnish (resins)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202068	wet litho overvarnish (vehicle)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202069	grease- and oil-barrier overprint (CAP)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202070	heat-sealable overprint (CAP)	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202071	hi-gloss thermoset overprint(resins/CAP	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202072	oil resistant foodpail overprint varnis	T	T	T	T	T	T	T	T	F	P	3	
285126700	N0202073	hot melt adhes release overprint varnis	T	T	T	T	T	T	T	T	F	P	3	
285131100	OA90-13471	CBI761680	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13479	CBI746040	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13485	CBI519567	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13491	CBI765393	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13497	CBI613106	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13503	CBI755405	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13511	CBI528212	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13516	CBI494927	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13522	CBI643299	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13527	CBI68328	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13533	CBI116226	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13539	CBI670420	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13544	CBI535029	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13549	CBI234623	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-13554	CBI483011	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-20343	CBI449393	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-25125	CBI754088	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-26606	CBI731887	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-26716	CBI768999	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-26836	CBI738270	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-27031	CBI741278	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-27036	CBI548094	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-31065	CBI956195	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-32492	CBI395172	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-32516	CBI796367	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-34386	CBI353191	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-34874	CBI424106	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-34969	CBI861695	F	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285131100	OA90-35053	CBI477927	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-39544	CBI334993	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-8009	CBI406211	F	F	F	F	F	F	F	F	F	P	3	
285131100	OA90-8278	CBI992725	F	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-10227	CBI184542	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-11229	CBI815526	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-11568	CBI349975	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-11571	CBI684889	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1173	CBI31289	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1177	CBI696604	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1181	CBI487182	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1254	CBI216179	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1269	CBI961881	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-13691	CBI363106	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-13711	CBI328538	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1385	CBI941603	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1391	CBI758264	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1397	CBI10528	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1401	CBI691878	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1407	CBI286336	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-14199	CBI866061	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-14214	CBI779831	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1433	CBI1609	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1444	CBI289036	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-16730	CBI648610	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-16735	CBI92897	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-16818	CBI64943	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-16822	CBI638876	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-16829	CBI586236	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-16834	CBI42526	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-16887	CBI196177	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-16912	CBI602266	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-1717	CBI659573	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-17630	CBI535089	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-19047	CBI860135	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-19998	CBI838822	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-20450	CBI540505	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-20458	CBI509804	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-20534	CBI838794	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-20625	CBI107074	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-20632	CBI671753	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-2244	CBI636337	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-22443	CBI882741	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-22458	CBI223493	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-22464	CBI626420	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-22468	CBI271943	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-22475	CBI141690	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-22483	CBI197818	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-2283	CBI461311	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-2313	CBI503281	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-23560	CBI841895	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-23590	CBI135788	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-2394	CBI226114	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-2413	CBI123836	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-24657	CBI295494	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-25070	CBI705034	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-25072	CBI872224	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-25074	CBI42789	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-25077	CBI202251	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-25080	CBI761650	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-25083	CBI59269	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285131300	OA90-25086	CBI739104	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-25719	CBI150175	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-25818	CBI10931	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26346	CBI240629	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26350	CBI934247	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26355	CBI713606	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26360	CBI247159	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26395	CBI654742	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26410	CBI713910	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26419	CBI974562	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26424	CBI544895	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26440	CBI448361	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26446	CBI203724	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26471	CBI416636	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26476	CBI275588	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26498	CBI10127	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26543	CBI811013	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26570	CBI939357	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26581	CBI33322.	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26595	CBI942632	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26624	CBI711225	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26635	CBI183084	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26661	CBI393436	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26666	CBI149806	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26678	CBI447491	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26693	CBI827501	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26705	CBI904799	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26727	CBI216256	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26740	CBI896888	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26746	CBI463571	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26767	CBI718835	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26795	CBI96637	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26800	CBI627262	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26810	CBI531711	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26849	CBI682401	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26887	CBI953364	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26939	CBI480271	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26942	CBI892512	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-26962	CBI721810	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27004	CBI141556	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27009	CBI577645	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27077	CBI85622	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27088	CBI267416	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27097	CBI385983	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27102	CBI660571	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27136	CBI415376	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27157	CBI20905	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27163	CBI523	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27180	CBI589117	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27194	CBI987376	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27212	CBI800951	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27218	CBI735172	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27227	CBI387462	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27250	CBI884694	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27275	CBI307551	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27294	CBI517341	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27299	CBI770327	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27413	CBI46430	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27773	CBI303413	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27814	CBI831344	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27820	CBI503152	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285131300	OA90-27832	CBI287324	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27835	CBI877621	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-27853	CBI905558	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28005	CBI71907	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28038	CBI719174	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28055	CBI500111	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28077	CBI904439	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28098	CBI946922	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28104	CBI575327	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28108	CBI995170	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28115	CBI395795	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28122	CBI8468	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28132	CBI62500	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28139	CBI85891.	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28143	CBI750742	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28150	CBI659297	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28154	CBI327574	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28161	CBI419983	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28165	CBI332710	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28169	CBI234028	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28172	CBI418949	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28173	CBI51048	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28179	CBI315466	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28185	CBI378612	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28191	CBI841128	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28203	CBI529743	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28224	CBI723216	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28235	CBI119592	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28246	CBI28760	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28250	CBI386679	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28263	CBI517295	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28267	CBI973647	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28273	CBI340590	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28288	CBI428733	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28289	CBI824267	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28303	CBI42937	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28330	CBI630506	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28334	CBI953107	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28341	CBI304650	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28345	CBI92404	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28349	CBI956773	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28356	CBI982031	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28377	CBI345096	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28388	CBI775685	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28393	CBI639689	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28398	CBI817463	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28404	CBI706023	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28412	CBI704278	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28458	CBI191219	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28545	CBI340149	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28551	CBI387822	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28601	CBI914658	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-28602	CBI759531	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-29528	CBI521885	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-2988	CBI992057	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-30140	CBI324171	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-31008	CBI618372	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-31014	CBI798712	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-31042	CBI251110	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-31059	CBI487797	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-31071	CBI890015	T	F	F	F	F	F	F	F	F	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285131300	OA90-32371	CBI362974	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-32418	CBI454626	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-32438	CBI852888	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-32443	CBI579744	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-32466	CBI118862	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-32470	CBI538798	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-32511	CBI579332	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33221	CBI406868	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33230	CBI216035	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33235	CBI360813	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33253	CBI797231	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33258	CBI56924	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33262	CBI64117	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33266	CBI144034	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33315	CBI640482	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33348	CBI993074	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33644	CBI467278	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33650	CBI742827	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33657	CBI298282	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33678	CBI615892	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-33691	CBI550929	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34334	CBI62680	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34353	CBI973228	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34365	CBI153196	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34515	CBI223917	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34520	CBI425999	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34526	CBI746941	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34542	CBI501324	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34563	CBI452259	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34623	CBI692199	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34633	CBI806058	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34637	CBI957170	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34644	CBI853937	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34650	CBI993456	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34655	CBI274252	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34670	CBI419497	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34673	CBI563467	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34688	CBI479094	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34698	CBI471047	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34897	CBI109163	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-34996	CBI118949	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35002	CBI546950	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35037	CBI771451	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35043	CBI324465	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35048	CBI700660	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35071	CBI270575	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35119	CBI361127	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35129	CBI874148	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35170	CBI563704	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35191	CBI207675	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35200	CBI997877	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35202	CBI309062	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35208	CBI494136	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35220	CBI910514	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35230	CBI424851	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35234	CBI998724	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35254	CBI704300	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-35261	CBI318026	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-359	CBI409830	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-36018	CBI664678	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-36023	CBI766537	T	F	F	F	F	F	F	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285131300	OA90-36031	CBI509990	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-36048	CBI158069	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-39495	CBI689107	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-39526	CBI535280	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-39531	CBI522953	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-39553	CBI39812	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-41382	CBI967478	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-41481	CBI147602	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-42022	CBI642573	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-42047	CBI681685	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-42092	CBI58772	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-42319	CBI626806	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-43421	CBI885849	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-43451	CBI795281	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-4942	CBI775645	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-4945	CBI651155	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5006	CBI890113	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5012	CBI580938	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5016	CBI928304	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5038	CBI891706	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5044	CBI773051	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5050	CBI557218	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5063	CBI399975	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5093	CBI989456	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5103	CBI848520	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5109	CBI823339	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5127	CBI830859	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5135	CBI168149	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5144	CBI935190	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5150	CBI397088	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5155	CBI548066	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5161	CBI796495	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5193	CBI35323	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5236	CBI551303	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5260	CBI605239	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5265	CBI867843	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5268	CBI198239	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5323	CBI290245	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-5330	CBI83159.	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-7903	CBI296679	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-7908	CBI437558	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-7922	CBI956282	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-7926	CBI113099	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-7930	CBI197443	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-7939	CBI705499	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-8068	CBI359394	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-8133	CBI387118	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-8180	CBI614084	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-9321	CBI341345	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-9341	CBI178917	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-9756	CBI428274	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-9788	CBI98224	T	F	F	F	F	F	F	F	F	P	3	
285131300	OA90-9845	CBI4472	T	F	F	F	F	F	F	F	F	P	3	
285133100	IA000171	Rust-Oleum Gloss Black	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000172	VHT Flame Proof Coating	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000173	Derusto Clear Spray	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000174	Silathane Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000175	Krylon Int./Ext. Enamel	F	F	F	F	F	F	F	F	F	T	P	3
285133100	IA000176	Heavy Duty Lacquer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000177	Broma Decorative Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000178	Derusto Preventive Enamel	T	T	T	T	T	T	T	T	T	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	IA000179	Dart Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000180	VHT Chrome Spray	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000181	Clear Spray Shellac	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000182	Derusto Epoxy Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000183	Champion Sprayon Epoxy	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000184	Shining Armour Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000185	Testors Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000186	Daz-L Fluorescent Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000187	Tough Coat BBQ Finish	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000188	Appliance Epoxy Finish	T	T	T	T	F	F	F	T	F	P	3	
285133100	IA000189	Hi-Gloss Spray Lacquer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000190	Decrolon Acrylic Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000191	Polyurethane Clear Satin	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000192	Tough Coat Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000193	Appliance Epoxy Enamel	T	T	T	T	F	F	F	T	F	P	3	
285133100	IA000194	Rust Beater Tough Coat	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000195	High-Heat Spray Enamel	T	T	T	T	F	F	F	T	T	P	3	
285133100	IA000196	Polyurethane Clear Gloss	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000197	Gloss Black Lacquer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000198	Quick'n Easy Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000199	Plasti Kote Lacquer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000200	Plasti Kote Engine Enamel	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000201	Plasti Kote Trunk Paint	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000202	Plasti Kote Super Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000203	Plasti Kote Hot Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000204	Plasti Kote Fluorescent	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000205	Plasti Kote Car Color	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000206	Plasti Kote Rust Not	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000227	Bright Beauty Primer (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000228	Bondo Easy Sanding Primer (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000229	Plasti-Kote Primer (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000236	Westley's Undercoating (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000239	Bondo Undercoating (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000240	3M Rubberized Undercoat (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000245	Valspar Varnish Spray (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000302	Make a Chalkboard	T	T	T	T	F	F	F	F	F	P	3	
285133100	IA000309	Derusto Preventive Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000420	Bar B Q Spray Paint	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000421	Hammer Finish	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000422	Epoxy Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000423	Home & Marine Superspar	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000424	Rust Oleum Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000425	Krylon Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000426	Fuller Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000427	Zynolyte Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000428	Utilac Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000429	Krylon Black Spray Lacquer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000430	Rust Oleum Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000431	Van & Truck Spray Paint	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000432	Krylon Chrome Aluminum	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000433	Medalist Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000434	Ace Lacquer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000435	Ace Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000436	Tripp Liquid Plastic	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000437	Ace Heat Resistant Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000438	Rust Oleum Clear Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000439	Rust Oleum Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000452	QD30 Stain Sealer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000454	Superfast Z Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000455	NYBCO Filler Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000456	Sandable Gray Primer	T	T	T	T	T	T	T	T	T	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	IA000457	Supercoat Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000458	Duro Sandable Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000459	Krylon Rust Magic	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000460	Basic Black Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000461	White Pigmented Kilz	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000463	E.-B. Emulsa Bond Check	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000465	Zynolyte Spray Stain	T	T	T	T	T	T	T	F	P	3		
285133100	IA000466	Behr Spray Stain Seal	T	T	T	T	T	T	T	F	P	3		
285133100	IA000468	Interior Spray Paint	T	T	T	T	T	T	T	F	P	3		
285133100	IA000472	Ace Spray Stain	T	T	T	T	T	T	T	F	P	3		
285133100	IA000578	High Gloss Spray Enamel	T	T	T	T	T	T	T	T	P	3		
285133100	IA000579	Appliance Enamel	T	T	T	T	F	F	F	T	F	P	3	
285133100	IA000580	Anti Rust Primer	T	T	T	T	T	T	T	T	P	3		
285133100	IA000581	Clear Acrylic Spray	T	T	T	T	T	T	T	T	P	3		
285133100	IA000581	Clear Acrylic Spray	T	T	T	T	T	T	T	T	P	3		
285133100	IA000582	Bumper Black Spray Paint	T	T	T	T	T	T	T	T	P	3		
285133100	IA000583	Plasti Kote Spray Vinyl	T	T	T	T	T	T	T	T	P	3		
285133100	IA000584	Krylon Rust Magic	T	T	T	T	T	T	T	T	P	3		
285133100	IA000585	Krylon Spray Enamel	T	T	T	T	T	T	T	T	P	3		
285133100	IA000586	Engine Spray Enamel	F	F	F	F	F	F	F	F	T	P	3	
285133100	IA000587	High Heat Spray Paint	T	T	T	T	F	F	F	T	P	3		
285133100	IA000588	Bright Beauty Lacquer	T	T	T	T	T	T	T	T	P	3		
285133100	IA000589	Bright Beauty Enamel	T	T	T	T	T	T	T	T	P	3		
285133100	IA000590	Instant Chrome	F	F	F	F	F	F	F	F	T	P	3	
285133100	IA000591	Auto Panel Paint	F	F	F	F	F	F	F	F	T	P	3	
285133100	IA000592	Black Bumper Coating	F	F	F	F	F	F	F	F	T	P	3	
285133100	IA000593	Rust Oleum Spray Paint	T	T	T	T	T	T	T	T	P	3		
285133100	IA000594	Appliance Epoxy Spray	T	T	T	T	F	F	F	T	F	P	3	
285133100	IA000595	Fast Drying Spray Enamel	T	T	T	T	T	T	T	T	P	3		
285133100	IA000596	High Gloss Spray Enamel	T	T	T	T	T	T	T	T	P	3		
285133100	IA000597	High Temperature Spray	T	T	T	T	F	F	F	T	P	3		
285133100	IA000598	Auto Spray Touch Up	F	F	F	F	F	F	F	F	T	P	3	
285133100	IA000599	Varathane Liquid Plastic	T	T	T	T	T	T	T	T	P	3		
285133100	IA000600	NYBCO Chrome Plate	F	F	F	F	F	F	F	F	T	P	3	
285133100	IA000601	Major Sele Spray Enamel	T	T	T	T	T	T	T	T	P	3		
285133100	IA000602	Rust Guard Halt Rust	T	T	T	T	T	T	T	T	P	3		
285133100	IA000603	Magic Self Spray	T	T	T	T	T	T	T	T	P	3		
285133100	IA000604	Zynolyte Epoxy Enamel	T	T	T	T	T	T	T	T	P	3		
285133100	IA000605	Appliance Epoxy Enamel	T	T	T	T	F	F	F	T	F	P	3	
285133100	IA000606	Quick Dry Spray Enamel	T	T	T	T	T	T	T	T	P	3		
285133100	IA000607	Quick Dry Spray Lacquer	T	T	T	T	T	T	T	T	P	3		
285133100	IA000608	PPG Spray Enamel	T	T	T	T	T	T	T	T	P	3		
285133100	IA000609	Derusto Metallic Finish	T	T	T	T	T	T	T	T	P	3		
285133100	IA000610	Derusto Engine Spray Enamel	F	F	F	F	F	F	F	F	T	P	3	
285133100	IA000611	Dap Spray Paint	T	T	T	T	T	T	T	T	P	3		
285133100	IA000621	Spot Filler (aerosol)	T	T	T	T	T	T	T	T	P	3		
285133100	IA000622	Spray Primer for Metal	T	T	T	T	T	T	T	T	P	3		
285133100	IA000623	Scratch Filler & Primer (aerosol)	T	T	T	T	T	T	T	T	P	3		
285133100	IA000624	Auto Spray Primer	T	T	T	T	T	T	T	T	P	3		
285133100	IA000625	K Mart Sandable Primer (aerosol)	T	T	T	T	T	T	T	T	P	3		
285133100	IA000627	Rust Preventative Primer (aerosol)	T	T	T	T	T	T	T	T	P	3		
285133100	IA000628	Rust Preventative Enamel (aerosol)	T	T	T	T	T	T	T	T	P	3		
285133100	IA000635	Deft Interior Spray Stain (aerosol)	T	T	T	T	T	T	T	F	P	3		
285133100	IA000719	Bright Metallis Finish (aerosol)	T	T	T	T	T	T	T	T	P	3		
285133100	IA000720	Krylon Interior Spray Enamel	T	T	T	T	T	T	T	T	P	3		
285133100	IA000721	Rust Oleum Stops Rust (aerosol)	T	T	T	T	T	T	T	T	P	3		
285133100	IA000722	Krylon Int/Ext Spray Enamel	T	T	T	T	T	T	T	T	P	3		
285133100	IA000723	Varathane Clear Finish (aerosol)	T	T	T	T	T	T	T	T	P	3		
285133100	IA000724	Hi-Gloss Spray Lacquer	T	T	T	T	T	T	T	T	P	3		
285133100	IA000725	NYBCO Epoxy Paint (aerosol)	T	T	T	T	T	T	T	T	P	3		
285133100	IA000726	Heat Proof Coating (aerosol)	T	T	T	T	F	F	F	T	P	3		

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	IA000727	Super Durable Epoxy (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000728	Polyurethane Super Colors (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000729	Ultra Super Enamel (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000731	Plasti Kote Bumper Chrome (aerosol)	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000732	Decrolon Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000733	Derusto Barbeque Black Spray Paint	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000734	Derusto Heat Master Spray Enamel	T	T	T	F	F	F	T	T	T	P	3	
285133100	IA000735	Decrolon Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000736	Auto Bumper Spray	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000737	Quick N Easy Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000738	Derusto C Glo Flourescent Spray	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000739	Superacrylic Controls Rust (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000740	Dead Flat Black Lacquer Spray	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000741	High Heat Aluminum (aerosol)	T	T	T	F	F	F	T	T	T	P	3	
285133100	IA000742	Epoxy Poppy Red Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000743	Clear Spray Shellac	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000744	Wet Paint Screaming Yellow (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000760	Krylon Spray Primer (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000761	Sandable Auto Primer (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000762	Pigmented Shellac Curall (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000763	Decrolon Acrylic Spray	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000764	Zinc Chromate Rustproof (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000765	Plastic Flexible Primer (aerosol)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000875	Truck & Van Color Yellow Spray	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000876	Wrinkle Finish Texture (spray paint)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000877	Body Shop Import Color (spray Paint)	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000878	Wrinkle Finish	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000879	VHT Hood Bumper & Trim	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000880	Flame Proof Coating	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000881	Expansion Chamber Paint	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000882	VHT Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000883	VHT Engine Enamel	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000884	Plate Metalizing Spray	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA000885	Minute Finish Spray	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000886	Clear Protective Acrylic Spray	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000887	Stops Rust Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000888	Bright Metallic Finish	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000889	1000F Hi Temp Paint	T	T	T	F	F	F	T	T	T	P	3	
285133100	IA000890	Hamm-R Finish	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000891	Wrinkle Fin. Forest Green	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000892	Utilac Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000893	Rust Inhibitor Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000894	Krylon Interior Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000895	Krylon Fluorescent	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000896	High Heat Spray Paint	T	T	T	F	F	F	T	T	T	P	3	
285133100	IA000897	Fast Dry Pumpkin Orange Spray	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000898	Wet Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000899	Spray Epoxy	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000900	Spruce 473 Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000901	Great Day Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000902	Fiesta Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000903	Un-Rust Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000904	Whiz On Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000905	Sherwin Williams Lacquer	T	T	T	T	T	T	T	T	F	P	3	
285133100	IA000906	VHT Spray Lacquer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000916	Zap Universal Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000917	Hi Performance Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000918	VHT Prime Coat	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000919	Omega Primer/Scratch Filler	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000920	Klean N' Prime	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000921	Krylon Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	IA000922	Red Oxide Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000923	Rust Inhibitive Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000924	Rust Preventative Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000925	Fast Dry Iron Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000926	Eclipse Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000927	White Primer /Sealer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000928	White Pigmented Shellac	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000929	Curall Enamel Undercoat	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000930	Stain Block Primer/Sealer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000931	Un-Rust Spray Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000932	Galvanize It Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA000935	Krylon Spray Varnish	T	T	T	T	T	T	T	T	F	P	3	
285133100	IA000936	Blond It Spray Stain	T	T	T	T	T	T	T	T	F	P	3	
285133100	IA001024	Exoxy Hi Gloss Enamel	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001025	Krylon Acrylic Spray	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001026	Krylon Engine Color	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA001027	Krylon Matte Finish	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001028	Krylon Rust Magic	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001029	Touch 'N' Spray	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001030	Tuff N Easy Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001031	Bar B Q Spray Paint	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA001032	Zinc Sele Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001033	Clear Sele 717 (spray paint)	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001034	Stops Rust Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001035	Vinyl Coat Satin White	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001036	Shellac Seals Protects	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001037	Now Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001038	Home & Marine Super Spar	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001039	Competition Metal Flake Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001040	Imperial Enamel Spray	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001041	Speedy Dry	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001042	Sparvar High Heat Paint	T	T	T	T	F	F	F	T	T	P	3	
285133100	IA001043	Sparvar Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001044	Sparvar Perma Clear	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001045	Regal Plate	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001046	Spray Mate	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001047	Spatter Spray Paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001048	Auto Touch-Up Spray	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA001049	Tempo Engine Enamel	F	F	F	F	F	F	F	F	F	P	3	
285133100	IA001050	Superacrylic Control Rust	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001069	Nar Hyde Plastic Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001070	Flex Primer 4185	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001071	Zinc Chromate Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001072	Zinc Coat Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001073	Easy Sanding Primer/Seal	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001074	Anti Rust Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001075	Sparvar Spray Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001076	Quik Spray Grey Primer	T	T	T	T	T	T	T	T	T	P	3	
285133100	IA001077	Krylon Spray Varnish	T	T	T	T	T	T	T	T	F	P	3	
285133100	OA90-1014	CBI914620	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1023	CBI825513	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-10746	CBI960787	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-10752	CBI994025	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1116	CBI391467	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1123	CBI460442	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1128	CBI110996	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1133	CBI528122	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1196	CBI448975	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1202	CBI473118	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1213	CBI848489	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1222	CBI273243	T	T	T	T	T	T	T	T	T	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	OA90-1226	CBI985753	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1235	CBI167468	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1249	CBI972871	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1263	CBI734849	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1277	CBI962144	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1288	CBI555759	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1294	CBI594108	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1300	CBI231951	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1306	CBI574381	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1311	CBI916465	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-13684	CBI204697	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-13697	CBI870828	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-13701	CBI171351	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-13705	CBI454276	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-14100	CBI220533	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1416	CBI218406	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1420	CBI538587	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-14206	CBI586309	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-1425	CBI728127	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-14258	CBI400850	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-14273	CBI200958	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-14276	CBI420953	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-14350	CBI328041	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-1439	CBI955162	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1450	CBI406193	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-1456	CBI978021	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1461	CBI226499	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1466	CBI362197	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1471	CBI338739	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1474	CBI487371	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-14859	CBI316132	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-14864	CBI707618	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-14869	CBI383490	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-14873	CBI66008	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-14879	CBI588205	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-152	CBI989385	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16097	CBI863795	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16375	CBI267717	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16387	CBI561589	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16410	CBI310643	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1662	CBI626944	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16706	CBI340174	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16724	CBI975327	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16793	CBI935624	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16800	CBI927221	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16807	CBI282763	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16811	CBI826579	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16840	CBI252180	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16877	CBI911794	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16907	CBI681405	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-16927	CBI667729	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1695	CBI68469	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-16958	CBI239693	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-17638	CBI902169	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-17687	CBI385206	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-17696	CBI85860	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-18351	CBI808213	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-18357	CBI491139	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-18659	CBI57540	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-18718	CBI30945	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-1948	CBI541073	T	T	T	T	T	T	T	T	T	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	OA90-19677	CBI370959	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-197	CBI817874	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-19723	CBI747727	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-19728	CBI944730	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-19734	CBI962169	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20072	CBI646607	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20133	CBI491346	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20194	CBI339573	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-20207	CBI297939	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-20335	CBI338682	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20341	CBI605435	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20465	CBI257118	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20473	CBI407145	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20486	CBI717181	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20494	CBI133157	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20502	CBI286170	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20510	CBI766153	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20518	CBI659430	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20526	CBI86761	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20555	CBI969093	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20562	CBI297589	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20570	CBI186265	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20578	CBI538030	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20586	CBI657145	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20594	CBI244233	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20602	CBI895126	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20609	CBI69315	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-20617	CBI413126	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-21476	CBI494409	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2238	CBI632440	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-22450	CBI6289	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2250	CBI333399	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2255	CBI941202	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2260	CBI324192	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2267	CBI493223	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2273	CBI239356	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2279	CBI289445	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2289	CBI752495	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2295	CBI101652	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2299	CBI932874	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2306	CBI71268	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23416	CBI78516	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23418	CBI901030	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23420	CBI733985	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23423	CBI683479	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23425	CBI274844	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23427	CBI58521	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23429	CBI766789	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23486	CBI11730	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23505	CBI996184	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23511	CBI77374	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23517	CBI798550	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23535	CBI456408	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23540	CBI158146	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23546	CBI609277	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23551	CBI590427	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23565	CBI494356	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23570	CBI409687	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-23579	CBI32314	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2388	CBI768610	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2399	CBI610217	T	T	T	T	T	T	T	T	T	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	OA90-2404	CBI281999	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2409	CBI754610	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-24420	CBI756596	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-24427	CBI41042	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-24543	CBI743736	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-24639	CBI335823	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-24644	CBI341103	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-24649	CBI25417	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-24660	CBI673428	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-24668	CBI454730	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-24673	CBI227974	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25058	CBI53839	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-25062	CBI818966	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-25066	CBI828219	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-25089	CBI150747	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-25091	CBI766047	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-25093	CBI542344	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-25110	CBI105540	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25112	CBI396899	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25118	CBI663871	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-25123	CBI591194	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25129	CBI745472	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-25133	CBI8474	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25135	CBI97944	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-25137	CBI292741	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-25140	CBI118500	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-25144	CBI249170	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25146	CBI967269	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25149	CBI793116	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-25151	CBI974339	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-253	CBI969974	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2567	CBI816498	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25706	CBI513110	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25711	CBI29095	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25714	CBI885734	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25725	CBI212098	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25730	CBI348949	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25736	CBI272962	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-25740	CBI978804	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26373	CBI33362	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26377	CBI743232	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26383	CBI965958	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26389	CBI163384	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26400	CBI540118	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26404	CBI110920	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26415	CBI805035	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26428	CBI972713	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26452	CBI708394	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26457	CBI927801	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26461	CBI964800	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26467	CBI343980	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26480	CBI147722	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26488	CBI282182	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26494	CBI363331	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26503	CBI487423	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26511	CBI561614	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26516	CBI863005	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26520	CBI405239	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26525	CBI793566	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26529	CBI302607	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26533	CBI730367	T	T	T	T	T	T	T	T	T	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	OA90-26539	CBI892007	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26548	CBI614453	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26554	CBI307347	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26558	CBI9134	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26566	CBI789712	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26575	CBI185039	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26587	CBI456405	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26591	CBI255029	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26600	CBI514577	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26610	CBI158790	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26616	CBI443036	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26620	CBI978984	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26629	CBI114627	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26641	CBI829717	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26645	CBI578932	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26649	CBI67387	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26653	CBI744914	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26672	CBI122326	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26683	CBI156861	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26687	CBI406705	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26697	CBI978478	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26701	CBI970639	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26710	CBI929059	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26721	CBI826077	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26732	CBI950175	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26751	CBI711694	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-26755	CBI407575	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26759	CBI664227	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26772	CBI274384	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26780	CBI976533	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26784	CBI316492	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26789	CBI339524	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26806	CBI858331	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26815	CBI943930	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26819	CBI76347	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26824	CBI398886	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26830	CBI225657	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26843	CBI49605	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-26854	CBI297107	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-26860	CBI323308	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26865	CBI128236	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26873	CBI896593	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26877	CBI897981	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26881	CBI796955	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26892	CBI461180	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26898	CBI274301	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26902	CBI234700	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26913	CBI298488	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26919	CBI135410	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26925	CBI253282	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26929	CBI458907	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26935	CBI261311	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26946	CBI954092	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26950	CBI715803	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26958	CBI349028	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26967	CBI632076	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26973	CBI300083	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26981	CBI56815	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26985	CBI97266	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26991	CBI256407	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-26998	CBI603162	F	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	OA90-270	CBI601154	F	F	F	F	F	F	F	F	F	T	P	3
285133100	OA90-27013	CBI615015	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27019	CBI819521	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27042	CBI552051	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27047	CBI259918	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27055	CBI790362	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27059	CBI694	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27065	CBI143457	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27073	CBI769771	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27082	CBI133214	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27093	CBI844459	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27108	CBI357607	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27114	CBI839797	F	F	F	F	F	F	F	F	F	F	P	3
285133100	OA90-27120	CBI185091	F	F	F	F	F	F	F	F	F	F	P	3
285133100	OA90-27128	CBI893716	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27141	CBI730165	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27149	CBI914093	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27168	CBI434302	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27174	CBI344193	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27186	CBI252104	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27198	CBI914135	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27204	CBI539482	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27222	CBI910150	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27232	CBI296918	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27238	CBI891392	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27246	CBI228027	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27255	CBI855170	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27261	CBI946046	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27267	CBI360596	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27271	CBI436108	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27280	CBI758189	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27284	CBI994694	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27290	CBI111106	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-276	CBI689600	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27608	CBI996007	F	F	F	F	F	F	F	F	F	F	P	3
285133100	OA90-27780	CBI852641	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27863	CBI428311	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27874	CBI70434	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27890	CBI467159	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27896	CBI824142	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-279	CBI378210	F	F	F	F	F	F	F	F	F	F	P	3
285133100	OA90-27902	CBI992078	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-27952	CBI408724	F	F	F	F	F	F	F	F	F	F	P	3
285133100	OA90-27957	CBI642867	F	F	F	F	F	F	F	F	F	F	P	3
285133100	OA90-28032	CBI218923	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28062	CBI752701	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28068	CBI174888	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28197	CBI529790	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28217	CBI696813	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28228	CBI143182	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28239	CBI914505	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28256	CBI233147	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28277	CBI195822	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28291	CBI688837	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28297	CBI346153	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28418	CBI525708	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28434	CBI107203	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28464	CBI258370	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28483	CBI217483	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28494	CBI215737	T	T	T	T	T	T	T	T	T	T	P	3
285133100	OA90-28558	CBI908250	T	T	T	T	T	T	T	T	T	T	P	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	OA90-28565	CBI149198	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-28572	CBI356020	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-28579	CBI530103	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-28585	CBI600749	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-286	CBI144847	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-28613	CBI991360	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-288	CBI142835	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-28999	CBI416598	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-29098	CBI924798	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29105	CBI913133	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29264	CBI539654	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29277	CBI366255	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29280	CBI538011	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29284	CBI781258	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29290	CBI98027	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29295	CBI305617	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29299	CBI127362	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29304	CBI339921	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29317	CBI183870	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29321	CBI571760	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29328	CBI127967	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2933	CBI689808	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-2945	CBI780776	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2948	CBI866459	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-2970	CBI693856	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2974	CBI22124	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2977	CBI894365	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-2981	CBI323332	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29981	CBI593219	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29994	CBI187787	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-29998	CBI493024	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-30135	CBI872086	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-31019	CBI535488	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-31025	CBI167329	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-31031	CBI998982	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-31036	CBI320101	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-31047	CBI879714	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-31053	CBI625105	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-31077	CBI804209	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-32328	CBI470271	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32334	CBI900982	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32343	CBI871352	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-32347	CBI838287	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32351	CBI673067	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32358	CBI887356	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32365	CBI289995	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32425	CBI80432.	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32430	CBI82338	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32434	CBI252109	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32447	CBI945999	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32453	CBI742323	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32457	CBI454287	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32461	CBI293337	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32475	CBI188812	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32479	CBI739386	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32483	CBI488662	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32487	CBI52545	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32499	CBI180756	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32503	CBI735647	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32507	CBI635374	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-32522	CBI926822	T	T	T	T	T	T	T	T	T	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	OA90-33216	CBI147632	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33225	CBI752239	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33242	CBI293406	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33248	CBI335602	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33296	CBI210682	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33308	CBI248955	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33324	CBI523667	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33328	CBI566810	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33332	CBI448760	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33337	CBI295028	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33343	CBI4914	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33352	CBI452601	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33393	CBI658859	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33423	CBI48000	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33625	CBI418448	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33629	CBI561609	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-33652	CBI939536	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-33660	CBI132256	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-33665	CBI834445	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33671	CBI110057	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33686	CBI349060	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33703	CBI428264	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33710	CBI757153	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33713	CBI809269	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33722	CBI201748	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-33738	CBI558231	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33740	CBI656588	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-33744	CBI230059	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-34329	CBI902781	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34340	CBI532142	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34347	CBI632419	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34359	CBI347788	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34371	CBI227165	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-34376	CBI572467	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34382	CBI253653	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34511	CBI658434	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34532	CBI953820	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34537	CBI746275	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34548	CBI720668	F	T	F	F	T	F	F	F	F	P	3	
285133100	OA90-34555	CBI96586	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34560	CBI518493	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34567	CBI772501	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34583	CBI101452	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34588	CBI516839	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34593	CBI168144	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34617	CBI715833	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34628	CBI432302	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34665	CBI111858	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34676	CBI379668	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34703	CBI527225	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34720	CBI75877	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34748	CBI913756	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34763	CBI646027	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34769	CBI21293	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34800	CBI449788	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34810	CBI818341	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34840	CBI233633	F	T	F	F	T	F	F	F	F	P	3	
285133100	OA90-34845	CBI843079	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34859	CBI799805	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-34861	CBI292675	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-34865	CBI260423	T	T	T	T	T	T	T	T	T	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	OA90-34869	CBI436858	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34871	CBI459806	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34903	CBI919637	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34910	CBI520114	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34916	CBI551778	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34923	CBI762278	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34929	CBI394122	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34945	CBI354450	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34949	CBI871103	F	T	F	F	T	F	F	F	F	P	3	
285133100	OA90-34954	CBI6292	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34959	CBI243903	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34975	CBI604003	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34981	CBI189286	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34986	CBI106095	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-34991	CBI296000	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35008	CBI86989	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35015	CBI802927	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35021	CBI655718	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35025	CBI752713	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35030	CBI973543	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35065	CBI314129	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35076	CBI457222	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35083	CBI910930	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35089	CBI999931	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35095	CBI990898	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35101	CBI87641	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35108	CBI891133	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35113	CBI718624	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35123	CBI4433	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35141	CBI103327	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35146	CBI420123	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35165	CBI11472	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35175	CBI519938	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35181	CBI46050	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35186	CBI719529	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35213	CBI353284	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35225	CBI873361	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35240	CBI370883	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35244	CBI708718	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35249	CBI223864	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-354	CBI649961	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-35665	CBI461841	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35668	CBI957993	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35671	CBI83830	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35673	CBI582398	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35675	CBI228268	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35690	CBI421314	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-35958	CBI619146	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36028	CBI331361	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36036	CBI546837	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36043	CBI443977	F	T	F	F	T	F	F	F	F	P	3	
285133100	OA90-36052	CBI36702	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36065	CBI954331	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36071	CBI52297	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36079	CBI573204	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36084	CBI881360	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36089	CBI528977	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36095	CBI738688	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36105	CBI214205	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36112	CBI252407	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36119	CBI686447	T	T	T	T	T	T	T	T	T	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	OA90-36132	CBI414927	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36138	CBI277694	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36145	CBI297397	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36151	CBI589466	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36220	CBI889090	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36353	CBI824480	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36413	CBI18785	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-36453	CBI636927	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-37868	CBI44974	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-37874	CBI63908	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-38574	CBI787057	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-38580	CBI865440	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39465	CBI694702	T	T	T	T	F	F	F	F	F	P	3	
285133100	OA90-39472	CBI917353	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39479	CBI474734	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39483	CBI119121	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39489	CBI527793	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39500	CBI466633	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39505	CBI135650	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39509	CBI143889	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39514	CBI912734	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39520	CBI330867	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39557	CBI971677	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39561	CBI591887	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39565	CBI355254	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-39569	CBI178079	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41364	CBI962395	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41369	CBI110169	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41375	CBI700419	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41387	CBI370119	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41403	CBI774611	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41409	CBI649653	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41414	CBI837361	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41420	CBI755097	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41426	CBI980832	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41433	CBI87086	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41440	CBI182947	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41446	CBI359133	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41452	CBI477769	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41458	CBI386804	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41464	CBI840286	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41469	CBI928321	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41475	CBI938691	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41487	CBI294363	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41490	CBI697759	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-41497	CBI293476	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-42028	CBI700007	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-42038	CBI462087	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-42051	CBI933788	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-42063	CBI986675	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-42313	CBI828028	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-42325	CBI776230	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-42432	CBI414417	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-43092	CBI799281	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-43189	CBI835494	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-43349	CBI616074	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-43355	CBI100215	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-43791	CBI662565	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-43802	CBI217910	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-43807	CBI596265	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-4594	CBI497042	T	T	T	T	T	T	T	T	T	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	OA90-4599	CBI639966	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-4604	CBI262721	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-4609	CBI488833	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-4613	CBI189922	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-4977	CBI373004	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-5027	CBI284382	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-5033	CBI741249	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-5069	CBI759362	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-5212	CBI658655	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-5217	CBI739627	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-5223	CBI304409	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-5253	CBI165777	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-5275	CBI112686	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-5281	CBI870225	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-5339	CBI862043	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-5345	CBI402800	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-6201	CBI655840	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-6207	CBI22560	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-6249	CBI370714	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-6873	CBI920382	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7828	CBI709525	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7833	CBI543912	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7837	CBI702260	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7842	CBI391086	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7913	CBI357485	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7917	CBI227829	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7935	CBI495873	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7944	CBI214573	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7949	CBI842386	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7954	CBI142656	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7968	CBI943708	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7977	CBI477720	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7983	CBI69859	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7993	CBI935827	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-7997	CBI918998	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-8001	CBI356449	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-8064	CBI634042	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-8090	CBI8456	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-8095	CBI280419	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-8114	CBI579685	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-8197	CBI291251	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-8202	CBI492031	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-8206	CBI922585	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-8211	CBI820462	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-8270	CBI627214	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-8296	CBI800680	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-8440	CBI32626	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-8456	CBI440907	F	F	F	F	F	F	F	F	F	P	3	
285133100	OA90-9152	CBI749111	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9276	CBI52045	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9289	CBI480532	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9294	CBI894728	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9299	CBI916227	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9306	CBI116724	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9311	CBI62887	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9316	CBI39969	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9326	CBI277671	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9330	CBI170600	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9346	CBI869260	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9351	CBI204771	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9359	CBI256191	T	T	T	T	T	T	T	T	T	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285133100	OA90-9364	CBI754382	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9369	CBI903725	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9373	CBI728845	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9628	CBI684132	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9634	CBI250224	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9639	CBI927549	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9645	CBI396429	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9651	CBI860601	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9698	CBI142579	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9722	CBI615881	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9738	CBI220151	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9747	CBI309431	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9761	CBI752989	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9801	CBI664981	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9813	CBI392807	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9820	CBI460314	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9824	CBI547074	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9839	CBI160202	T	T	T	T	T	T	T	T	T	P	3	
285133100	OA90-9843	CBI401542	T	T	T	T	T	T	T	T	T	P	3	
285133100	RAD03301	Aerosol acrylic metallic paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	RAD03302	Aerosol acrylic paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	RAD03303	Aerosol alkyd paint	T	T	T	T	T	T	T	T	T	P	3	
285133100	RAD03304	Aerosol alkyd paint	T	T	T	T	T	T	T	T	T	P	3	
285150000	OA90-10760	CBI298359	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-10766	CBI120147	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11220	CBI850887	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11536	CBI990360	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11542	CBI606005	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11549	CBI6080	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11553	CBI457916	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11588	CBI839951	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11598	CBI957464	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11603	CBI999605	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11608	CBI301798	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11652	CBI650149	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11717	CBI939891	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11726	CBI57076.	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11729	CBI546159	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11747	CBI9997	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11758	CBI209423	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11772	CBI182638	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11795	CBI443268	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11801	CBI170568	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11804	CBI387684	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11815	CBI510757	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-11820	CBI422231	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-12922	CBI633436	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-12928	CBI253	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-12933	CBI94816.	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-12937	CBI566951	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-12943	CBI601980	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-12951	CBI792098	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-12959	CBI641907	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-12980	CBI461518	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-12984	CBI695478	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-13133	CBI921419	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-13602	CBI824419	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-13990	CBI86780	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-13994	CBI644275	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-13997	CBI816044	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-14363	CBI136289	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285150000	OA90-14533	CBI372113	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-14836	CBI541611	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-14854	CBI587951	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15212	CBI605330	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15215	CBI427877	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15218	CBI233537	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15222	CBI213750	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15225	CBI979311	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15231	CBI808124	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15233	CBI253822	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15236	CBI949415	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15240	CBI730409	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15244	CBI954688	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15249	CBI877302	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15253	CBI29052	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15260	CBI852997	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15264	CBI529975	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15268	CBI393497	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15271	CBI823443	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15273	CBI760042	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15281	CBI148446	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15283	CBI376567	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15285	CBI837588	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15291	CBI315837	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15296	CBI929618	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15299	CBI810065	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15303	CBI853826	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15306	CBI422138	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15320	CBI800008	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15323	CBI992625	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15326	CBI102504	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15340	CBI135561	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15343	CBI217757	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15345	CBI709492	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15347	CBI43628.	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15349	CBI709155	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15351	CBI17287	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15353	CBI711979	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15355	CBI288241	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15357	CBI299398	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15360	CBI431409	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15363	CBI252841	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15390	CBI149678	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15397	CBI642518	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15399	CBI162120	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15401	CBI116755	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15403	CBI937455	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15405	CBI439210	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15407	CBI117260	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15409	CBI351448	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15411	CBI318754	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15422	CBI601485	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15424	CBI978880	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15426	CBI140719	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15457	CBI59909	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15464	CBI223351	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15468	CBI21629	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15473	CBI157885	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15476	CBI3035	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15479	CBI546429	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15483	CBI419250	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285150000	OA90-15490	CBI50511	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15500	CBI759974	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15504	CBI749829	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15510	CBI993576	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15517	CBI179079	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15519	CBI521718	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15521	CBI598477	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15524	CBI253104	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15526	CBI274366	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15531	CBI969634	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15533	CBI286522	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15535	CBI539590	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15548	CBI753910	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15553	CBI66028	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-15555	CBI666927	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-16131	CBI723392	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-16449	CBI159602	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-16942	CBI230244	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-17623	CBI836262	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1772	CBI606214	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1776	CBI861594	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-17871	CBI747010	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1789	CBI901802	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1791	CBI410204	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1793	CBI465894	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1797	CBI577253	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1801	CBI770620	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1806	CBI106438	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1814	CBI611882	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18224	CBI636393	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18230	CBI740434	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18239	CBI215703	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18259	CBI368531	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18309	CBI861572	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18585	CBI479233	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18587	CBI733209	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18590	CBI2330	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18593	CBI143267	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18595	CBI126710	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18597	CBI379128	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18601	CBI395702	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18605	CBI106982	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18607	CBI779446	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18617	CBI872973	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18621	CBI334015	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18623	CBI520197	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18625	CBI965978	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18631	CBI986869	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18638	CBI83504	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18758	CBI909621	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-18975	CBI600492	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1900	CBI491606	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-19083	CBI47224	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1952	CBI525880	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1958	CBI910778	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-19590	CBI308559	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-19593	CBI760759	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1961	CBI793338	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1967	CBI43481	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-19774	CBI399794	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-19779	CBI845657	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285150000	OA90-19785	CBI559284	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-19788	CBI74571	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-1980	CBI474858	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-19802	CBI492552	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-19808	CBI519392	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-19818	CBI59048	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-19824	CBI769151	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-20050	CBI446301	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-20056	CBI552324	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-20094	CBI653359	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-20098	CBI135045	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-20246	CBI624090	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-20248	CBI871090	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-20250	CBI576495	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-20252	CBI962416	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-20258	CBI387538	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-20262	CBI444444	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-20266	CBI67377	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-21219	CBI663405	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-21229	CBI136908	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-2225	CBI81400	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-22404	CBI505080	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-22425	CBI849884	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-23414	CBI418281	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-23482	CBI36148	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-23524	CBI330787	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-23531	CBI827658	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-23609	CBI951756	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-23729	CBI25692	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-23791	CBI634974	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-23989	CBI654188	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-23999	CBI27745	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-24029	CBI538506	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-24039	CBI657478	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-24041	CBI57192	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-24048	CBI888218	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-2429	CBI131764	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-24390	CBI578118	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-25100	CBI538470	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-25353	CBI625912	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-25355	CBI347652	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-2556	CBI804805	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-25799	CBI552491	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-26221	CBI226386	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-27696	CBI196900	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-28650	CBI288467	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-29090	CBI392971	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-29092	CBI561379	F	F	F	F	F	F	F	F	F	P	3	
285150000	OA90-29587	CBI975810	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-29606	CBI691015	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-29688	CBI7673	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-29742	CBI227387	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-29827	CBI492129	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-29850	CBI835676	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-29858	CBI861434	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-29869	CBI483064	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-29968	CBI230341	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-29970	CBI406953	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-30061	CBI567935	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-30093	CBI783353	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-30405	CBI539305	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285150000	OA90-31213	CBI621010	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-31512	CBI932359	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-31514	CBI771268	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-31715	CBI189608	F	T	F	F	F	F	F	F	F	P	3	
285150000	OA90-32025	CBI654653	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33150	CBI33085	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33157	CBI527856	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33159	CBI68400	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33161	CBI795088	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33163	CBI171759	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33166	CBI4308	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33168	CBI328875	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33279	CBI317526	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33632	CBI763868	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33635	CBI41369	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33640	CBI41701	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33642	CBI249908	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33663	CBI221951	F	F	F	F	F	F	F	F	T	P	3	
285150000	OA90-33684	CBI597494	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33688	CBI28769	F	F	F	F	F	F	F	F	F	P	3	
285150000	OA90-33727	CBI184103	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33813	CBI753146	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33877	CBI598515	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33880	CBI790758	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33910	CBI129889	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-33983	CBI357992	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-34067	CBI544165	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-34963	CBI278212	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36158	CBI136284	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36160	CBI282854	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36162	CBI936525	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36164	CBI975101	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36166	CBI184301	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36174	CBI731325	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36176	CBI311605	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36178	CBI671703	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36181	CBI275328	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36201	CBI626023	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36206	CBI649859	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36209	CBI389392	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36231	CBI600023	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36371	CBI19520	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36406	CBI576670	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36439	CBI6666	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36671	CBI786095	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36673	CBI791783	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36675	CBI897880	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36677	CBI122298	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36679	CBI949713	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36681	CBI60081	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36684	CBI163631	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36724	CBI707794	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36731	CBI913675	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-36736	CBI316028	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-38237	CBI320010	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-38298	CBI520156	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-38305	CBI160702	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-38323	CBI684603	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-38331	CBI735073	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-38334	CBI816552	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-38353	CBI9573	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285150000	OA90-38369	CBI918826	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-38399	CBI495206	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-38404	CBI287072	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-38407	CBI190187	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-38411	CBI378024	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-38441	CBI8626	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-3980	CBI494443	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-3982	CBI724227	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-39996	CBI688839	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-40206	CBI403190	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-4064	CBI513133	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-40709	CBI79506.	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-40853	CBI645623	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-40895	CBI356738	F	F	F	F	F	F	F	F	F	P	3	
285150000	OA90-40930	CBI619630	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-41349	CBI585507	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-41356	CBI240838	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-42032	CBI255677	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-42043	CBI757342	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-42056	CBI111593	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-42060	CBI258442	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-42072	CBI987700	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-42075	CBI849452	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-42078	CBI713706	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-42138	CBI675442	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-42870	CBI389410	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-43083	CBI595147	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-43239	CBI756678	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-43241	CBI558020	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-43307	CBI334003	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-43309	CBI967072	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-43313	CBI54876	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-43813	CBI192070	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-43918	CBI237738	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-43931	CBI553571	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-680	CBI189963	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-6827	CBI360920	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-6887	CBI762675	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-6892	CBI293511	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-701	CBI715135	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-752	CBI12233	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-758	CBI516547	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-762	CBI379449	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-781	CBI629560	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-784	CBI107290	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-7868	CBI224245	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-893	CBI601614	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-897	CBI112	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-899	CBI698889	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-903	CBI679634	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-905	CBI111628	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-940	CBI693616	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-9462	CBI141621	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-9830	CBI339178	T	T	T	T	T	T	T	T	F	P	3	
285150000	OA90-9861	CBI298875	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000140	DupliColor Paint Stripper	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000141	Formby's Paint Remover (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000142	Rinse Off Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000143	Formby's Paint Remover (liquid)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000144	Kwik Semi-Paste Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000145	Formby's Remover Wash	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285152300	IA000146	Kwik Liquid No-Wash	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000147	Goof Off	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000148	Klean-Clean Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000149	Nasco Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000150	Strypeeze Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000151	Kutzit Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000152	SuperStrip Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000153	Nasco Sandpaper In A Can	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000154	Brush & Roller Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000155	Minwax Antique Refinisher	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000156	Liquid Sandpaper (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000158	Formby's Furniture Refinisher	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000307	Degloss Prepaint Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000372	Old Adhesive/Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000406	The Stripper (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000407	Tal Strip (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000408	NYBCO Off (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000409	Ace Spray Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000410	Jasco Speedomatic (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000411	Green's Liquid Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000412	Jasco Premium P&E Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000413	Green's MC Semi-Paste (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000414	Zynolyte Super Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000415	Ace Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000416	Formby's Furniture Refinisher	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000417	Klean-Clean (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000418	Zip Strip (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000419	Jasco Furniture Refinisher	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000555	Special Wood Formula	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000556	Growco Paint/Varnish Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000557	Wash Away Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000558	Ace Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000559	Goof Off Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000560	Paint and Varnish Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000561	Brush & Roller Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000562	Furniture Refinisher	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000563	Hope's Refinisher	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000564	Remov-z-it	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000565	Premium Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000566	Dexall Preparite (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000567	KEM Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000568	Wash Away Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000569	Crown Liquid Sander	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000570	Crown Brush & Roller Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000571	Paso Liquid Sander (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000572	Zip Strip (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000573	Zip Strip (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000574	Kutzit Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000575	Superstrip Paint/Varnish Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000576	Tuff Job	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000577	Bix Stripper (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000696	So Fast Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000697	Tal Strip Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000698	TMP Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000699	Klean Strip Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000700	Wash Away Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000701	Stripz Em (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000702	Tal Strip Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000703	So Fast Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000704	So Fast Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000705	So Fast Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285152300	IA000706	Strip X Paint Stripper	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000707	Klean Strip	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000708	Formby's Refinisher	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000709	Bix Stripper (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000710	Klean Strip Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000711	Klean Kutter Paint/Varnish Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000712	Quit N Time Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000713	Zip Sander (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000714	Zip Klean Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000715	Oops Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000716	Sunnyside Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000717	Kleenz Em Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000718	Stripz Em (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000841	Wash Away Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000842	Formby's Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000844	Tal Strip Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000845	Marhyde Liquid Sandpaper (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000846	Paso Liquid Sander (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000847	Flood Ease Surface Prep	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000848	NYBCO Stripper	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000849	Zip Strip (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000850	Wash Away Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000851	E Z Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000852	Dexall Preparite (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000853	Bon O San Deglosser	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000854	E Z Paint Deglosser	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000855	Room Groom Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000856	No Flame Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000857	NYBCO Oops Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000858	Anderson Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000859	Anderson's Brush Treet	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000860	Dayco Marine Strip	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000861	Skim Paint Var/Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000862	Charm Non Flammable Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000863	Savogran Superstrip	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000864	Zingo Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000865	Antique Refinisher	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000866	Quit'n Time Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000867	No Drip Strip (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000868	Furniture Refinisher	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000869	Rough & Ready Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000870	Formby's Wash	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000871	Saxon Remover/Stripper	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000872	Saxon Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000873	Formby's Furn Refinisher	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA000874	Goof Off Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001001	Woodgrain & Stripe (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001002	Bix Tuff Job (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001003	Zircon Spray Paint Stripper	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001004	Wash Away Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001005	Bix Stripper (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001006	Bix Tuff Job (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001007	LS Liquid Sandpaper (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001008	DIY Super Sav A Brush	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001009	H2 Off Pnt/Vrnsh Rm	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001010	Kwikeeze Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001011	Kutzit Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001012	No Sand (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001013	Klean Strip Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001014	Klean Kutter Paint/Varnish Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001015	Klean Strip Brush/Roller Cleaner	T	T	T	T	T	T	T	T	F	P	3	



Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285152300	IA001016	Marine Finish Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001017	Dap Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001018	Old Furniture Refinisher	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001019	Strip X Paint Stripper	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001020	KS 3 Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001022	KEM Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001023	Dexall Preparite (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001160	Sherwin Williams Wash	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA001161	Color Tile Paint Remover	T	T	T	T	T	T	T	T	F	P	3	
285152300	IA010021	After Wash (paint remover)	T	T	T	T	T	T	T	T	F	P	3	
285152300	N0107054	metal cleaner - paint stripper	T	T	T	T	T	T	T	T	F	P	3	
285152300	N0107055	metal cleaner - paint removal	T	T	T	T	T	T	T	T	F	P	3	
285152300	N0113077	heavy duty paint stripper	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-10020	CBI128658	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-10147	CBI101749	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-10727	CBI838536	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-1098	CBI921163	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11168	CBI809499	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11171	CBI256411	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11582	CBI885502	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11585	CBI593195	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11590	CBI29056.	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11613	CBI59599	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11617	CBI275816	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11622	CBI223252	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11626	CBI761222	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11629	CBI114191	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11632	CBI71081	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11635	CBI233443	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11638	CBI583746	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11642	CBI233402	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11647	CBI353534	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11650	CBI598798	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11656	CBI221041	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11678	CBI564988	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11681	CBI822996	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11686	CBI145611	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11689	CBI793734	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11694	CBI680170	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11696	CBI277513	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11699	CBI184221	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11705	CBI300366	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11708	CBI328510	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11711	CBI276960	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11723	CBI763739	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11733	CBI674680	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11742	CBI607884	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11752	CBI889890	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11755	CBI937182	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11766	CBI19004	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11785	CBI91775	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11788	CBI849997	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11791	CBI547412	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11809	CBI769399	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11812	CBI313957	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11828	CBI756816	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11836	CBI883573	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11840	CBI912069	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-11843	CBI387194	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-12092	CBI939201	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-12097	CBI737646	T	T	T	T	T	T	T	T	F	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285152300	OA90-13341	CBI712166	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-13360	CBI939779	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-13373	CBI827605	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-1370	CBI981681	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-14479	CBI204523	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-14501	CBI127596	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-14512	CBI447720	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-14521	CBI339653	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-14838	CBI719629	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-15312	CBI324400	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-15413	CBI90506	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-16120	CBI470960	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-16425	CBI441084	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-16720	CBI782912	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-17501	CBI458666	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-17554	CBI42485	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-17557	CBI139919	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-17901	CBI344067	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-18095	CBI690185	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-18232	CBI362396	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-18577	CBI251012	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-18581	CBI151942	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-20005	CBI14012	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-20008	CBI724398	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-20364	CBI478124	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-21581	CBI205115	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-21584	CBI911830	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-23500	CBI174189	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-23600	CBI950243	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-23727	CBI988898	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-23747	CBI569642	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-23751	CBI933331	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-24010	CBI904541	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-24024	CBI296081	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-24034	CBI216575	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-24043	CBI549882	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-24232	CBI863268	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-24235	CBI767616	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-24516	CBI462413	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25121	CBI131895	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25461	CBI553202	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25487	CBI58399	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25490	CBI32693	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25493	CBI355523	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25495	CBI559846	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25496	CBI338868	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25497	CBI988208	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25498	CBI802321	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25499	CBI800334	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25502	CBI663693	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25504	CBI129474	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25506	CBI103589	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25509	CBI99277	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-25951	CBI496527	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-26908	CBI229492	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-27880	CBI251132	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-27970	CBI65994	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-28085	CBI666784	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-28126	CBI626788	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-29799	CBI919676	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-30146	CBI804058	T	T	T	T	T	T	T	T	F	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285152300	OA90-31840	CBI968054	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-31985	CBI243835	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-31988	CBI171574	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-31992	CBI272005	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-3262	CBI263504	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-33283	CBI30356	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-33288	CBI382360	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-33817	CBI734921	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-33821	CBI435434	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-33842	CBI105833	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-33970	CBI621901	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-33985	CBI601082	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-33998	CBI841130	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-34002	CBI637159	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-34077	CBI987966	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-34083	CBI359450	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-34087	CBI458557	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-34098	CBI236706	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-34103	CBI424800	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-35150	CBI118846	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-36125	CBI551675	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-36183	CBI937374	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-36189	CBI639182	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-36323	CBI799922	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-36327	CBI817978	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-36345	CBI37078	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-36381	CBI442018	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-36480	CBI842248	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-36484	CBI546493	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-36753	CBI323888	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-37969	CBI774030	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-37975	CBI213000	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-37976	CBI571757	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-37991	CBI890481	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-37994	CBI776465	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38005	CBI508185	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38016	CBI536805	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38033	CBI281536	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38051	CBI565380	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38055	CBI840365	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38060	CBI213442	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38266	CBI310974	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38287	CBI899387	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38310	CBI92174	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38342	CBI115132	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38372	CBI204046	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38377	CBI710323	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38382	CBI179365	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38387	CBI34238	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-38783	CBI196321	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-3969	CBI730787	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-3990	CBI733509	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-3995	CBI494960	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-3999	CBI867019	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-41179	CBI496617	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-41338	CBI620897	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-41361	CBI212355	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-41393	CBI817395	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-41398	CBI25339	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-42069	CBI542766	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-42083	CBI444347	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285152300	OA90-42843	CBI405353	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-42877	CBI968184	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-43071	CBI66944.	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-43073	CBI433131	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-43122	CBI106045	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-43471	CBI818908	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-4389	CBI327035	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-5300	CBI743114	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-584	CBI15632	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-6436	CBI898879	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-6440	CBI437648	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-8147	CBI150515	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-9090	CBI418281	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-9192	CBI162999	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-9202	CBI431245	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-9334	CBI546327	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-9338	CBI945786	T	T	T	T	T	T	T	T	F	P	3	
285152300	OA90-9931	CBI579	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000157	Kwikkeeze Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000159	Rust-Oleum Thinning Oil	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000160	Oriole Paint Thinner	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000161	Lone Star Paint Thinner	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000162	Nasco Paint Thinner	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000163	Weldwood Cleaner/Thinner	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000164	Lenmar Lacquer Thinner	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000165	Kwik Lacquer Thinner	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000166	Nasco Turpex	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000167	Nasco Brush Cleaner	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000168	Nasco Lacquer Thinner	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000169	Penetrol Conditioner	T	T	T	T	T	T	T	T	F	P	3	
285153100	IA000170	Parks Lacquer Thinner	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-12087	CBI83826	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-12966	CBI598255	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-12972	CBI899769	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-13289	CBI103773	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-13291	CBI727141	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-14068	CBI825253	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-14842	CBI86962	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-14849	CBI222772	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-15275	CBI888768	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-15287	CBI203285	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-15334	CBI152151	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-15365	CBI374440	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-15370	CBI567742	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-15375	CBI481907	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-15382	CBI582090	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-15416	CBI990860	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-15428	CBI353854	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-15436	CBI515680	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16139	CBI921532	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16350	CBI555229	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16757	CBI197723	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16762	CBI937279	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16767	CBI598254	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16772	CBI914305	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16779	CBI459675	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16787	CBI999141	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16894	CBI863391	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16947	CBI231336	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16951	CBI573355	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16966	CBI217199	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285153100	OA90-16974	CBI908640	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16979	CBI938984	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-16984	CBI697457	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-1774	CBI25272	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-1780	CBI133816	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-18572	CBI560686	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19595	CBI150015	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19599	CBI73987	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19602	CBI309970	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19608	CBI311583	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19614	CBI439798	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19620	CBI80835	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19623	CBI728339	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19628	CBI192777	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19633	CBI540790	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19637	CBI909077	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19643	CBI507528	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19650	CBI324402	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19655	CBI776192	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19661	CBI448085	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19665	CBI176294	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19669	CBI857816	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19672	CBI961016	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19684	CBI602317	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19690	CBI920944	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19696	CBI452020	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19701	CBI292962	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19704	CBI875912	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19710	CBI76756	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-19713	CBI214740	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-24016	CBI751582	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-24387	CBI673710	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-25102	CBI422287	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-25104	CBI371783	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-25106	CBI859927	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-25116	CBI654559	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-25127	CBI115961	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-29307	CBI155272	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-29795	CBI55546.	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-31220	CBI373271	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-31732	CBI516295	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-3239	CBI302345	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-33146	CBI328830	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-33291	CBI925114	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-33778	CBI637560	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-33786	CBI145735	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-33793	CBI139421	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-33800	CBI912512	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-33805	CBI896335	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-33825	CBI91243	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-33827	CBI837320	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-33859	CBI974227	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-33875	CBI651774	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-34033	CBI448176	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-35389	CBI426390	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-35657	CBI215948	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36193	CBI358306	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36315	CBI558340	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36319	CBI150263	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36332	CBI479494	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36336	CBI786024	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285153100	OA90-36341	CBI760887	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36355	CBI867438	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36362	CBI927731	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36365	CBI356934	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36368	CBI155259	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36376	CBI618029	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36385	CBI98779	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36389	CBI92355	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36392	CBI411735	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36395	CBI127724	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36400	CBI788593	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36409	CBI808954	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36419	CBI218560	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36426	CBI381830	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36429	CBI409515	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36433	CBI366082	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36446	CBI710511	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36456	CBI100110	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36462	CBI350472	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36467	CBI588493	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36470	CBI50187	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36475	CBI789769	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36490	CBI298090	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-36760	CBI94352	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39582	CBI670971	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39588	CBI576860	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39594	CBI555582	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39600	CBI915650	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39604	CBI547759	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39610	CBI354682	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39616	CBI761829	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39623	CBI598502	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39630	CBI969590	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39637	CBI109073	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39640	CBI883403	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39645	CBI169353	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39649	CBI176836	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39655	CBI361216	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39662	CBI917290	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39664	CBI986308	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39670	CBI913108	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39674	CBI403717	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39680	CBI710194	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39687	CBI284314	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39693	CBI190206	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39699	CBI989154	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39705	CBI666061	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39711	CBI571676	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39717	CBI991998	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39723	CBI225804	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39727	CBI243180	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39729	CBI656694	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39736	CBI286929	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39742	CBI197342	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39751	CBI224363	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39757	CBI392602	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39762	CBI604692	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39771	CBI574547	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39778	CBI938846	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39783	CBI301516	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39789	CBI125357	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285153100	OA90-39802	CBI155100	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39817	CBI372600	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39824	CBI645426	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39831	CBI485737	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39839	CBI186556	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39851	CBI480617	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39857	CBI392000	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39863	CBI131304	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39871	CBI392205	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39881	CBI837808	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39887	CBI222794	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39894	CBI300451	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39901	CBI441140	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39905	CBI382648	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39910	CBI845884	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39915	CBI130744	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39921	CBI906638	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39927	CBI899186	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39936	CBI551719	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39946	CBI801687	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39955	CBI973078	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39957	CBI606360	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39962	CBI437959	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39965	CBI358614	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39971	CBI20493	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-39978	CBI486596	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40000	CBI610697	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40010	CBI296153	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40018	CBI572848	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40022	CBI47812	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40027	CBI859216	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40034	CBI851999	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40039	CBI611144	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40047	CBI710430	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40053	CBI926634	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40059	CBI679310	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40065	CBI650437	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40071	CBI89193	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40077	CBI69902	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40086	CBI884960	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40092	CBI818093	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40095	CBI8987	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40100	CBI207282	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40107	CBI728229	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40111	CBI816518	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40115	CBI540276	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40119	CBI378050	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40121	CBI449602	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40123	CBI684215	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40128	CBI205706	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40133	CBI163548	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40138	CBI913777	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40140	CBI308208	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40146	CBI505106	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40153	CBI890349	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40159	CBI611215	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40172	CBI831235	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40175	CBI536853	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40179	CBI84585	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40183	CBI103898	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40186	CBI615704	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285153100	OA90-40189	CBI564082	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40193	CBI800367	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40200	CBI79862	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40208	CBI799805	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40211	CBI748442	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40215	CBI63366	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40219	CBI52320	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40222	CBI272001	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40228	CBI421821	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40236	CBI976405	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40241	CBI807441	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40245	CBI66299	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40250	CBI233433	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40255	CBI829755	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40257	CBI315625	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40262	CBI712566	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40269	CBI189492	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40278	CBI724461	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40283	CBI53163	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40292	CBI756648	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40298	CBI646792	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40306	CBI924579	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40311	CBI927205	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40315	CBI780733	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40318	CBI409246	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40322	CBI859337	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40328	CBI193756	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40334	CBI543122	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40341	CBI317333	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40348	CBI653305	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40354	CBI313074	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40360	CBI305299	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40368	CBI616302	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40376	CBI296174	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40384	CBI455508	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40392	CBI104801	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40398	CBI445114	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40415	CBI776117	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40418	CBI412762	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40421	CBI642375	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40437	CBI688245	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40440	CBI784372	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40445	CBI484960	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40450	CBI868222	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40457	CBI373428	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40466	CBI231152	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40472	CBI77175	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40481	CBI965074	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40489	CBI303507	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40498	CBI15247.	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40501	CBI981491	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40505	CBI785584	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40509	CBI497844	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40514	CBI710143	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40517	CBI123109	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40520	CBI28370	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40524	CBI954373	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40531	CBI683628	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40537	CBI397675	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40542	CBI310855	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40548	CBI428659	T	T	T	T	T	T	T	T	F	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285153100	OA90-40551	CBI496117	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40557	CBI974933	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40561	CBI77816	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40566	CBI469708	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40571	CBI856269	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40595	CBI521692	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40599	CBI941329	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40604	CBI723807	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40607	CBI157209	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40611	CBI657830	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40617	CBI608362	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40623	CBI473222	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40630	CBI871400	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40638	CBI421173	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40644	CBI429712	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40652	CBI633329	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40660	CBI210984	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40666	CBI842911	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40672	CBI775142	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40680	CBI563664	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40688	CBI493973	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40694	CBI479364	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40699	CBI265107	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40704	CBI155999	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40711	CBI126147	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40716	CBI420968	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40724	CBI756989	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40730	CBI303581	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40736	CBI584404	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40742	CBI875514	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40750	CBI179411	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40758	CBI606964	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40766	CBI229415	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40774	CBI150315	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40780	CBI275464	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40786	CBI943230	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40792	CBI517062	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40797	CBI69600	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40802	CBI747030	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40808	CBI218217	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40811	CBI878561	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40815	CBI155046	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40821	CBI344127	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40827	CBI684869	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40834	CBI231409	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40841	CBI904346	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40847	CBI193906	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40855	CBI924834	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40871	CBI864399	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40908	CBI316977	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40913	CBI756764	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40933	CBI993173	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40938	CBI469615	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-40946	CBI443792	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-42332	CBI472017	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-42880	CBI310408	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-43247	CBI891052	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-43251	CBI102301	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-43253	CBI290586	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-43257	CBI536857	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-4410	CBI790232	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
285153100	OA90-4412	CBI792818	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-6598	CBI625866	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-676	CBI465817	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-9267	CBI12746	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-9733	CBI358159	T	T	T	T	T	T	T	T	F	P	3	
285153100	OA90-9767	CBI270971	T	T	T	T	T	T	T	T	F	P	3	
285159800	EJ210001	professional glazing compound	T	T	T	T	T	T	T	T	F	P	3	
285159800	EJ220001	putty	T	T	T	T	T	T	T	T	F	P	3	
285159800	EJ220002	putty	T	T	T	T	T	T	T	T	F	P	3	
285159800	IA001315	Professional glazing	T	T	T	T	T	T	T	T	F	P	3	
285159800	IA001316	Putties	T	T	T	T	T	T	T	T	F	P	3	
285159800	N0113097	paint brush cleaner	T	T	T	T	T	T	T	T	F	P	3	
285159800	N0113127	paint brush cleaner	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-10214	CBI277933	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-10218	CBI705155	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-10273	CBI689799	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-11562	CBI777938	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-11565	CBI666799	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-16093	CBI483759	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-18562	CBI62894	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-18733	CBI511652	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-19682	CBI935050	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-23991	CBI760516	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-24106	CBI981202	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-26196	CBI757335	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-27762	CBI368619	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-30457	CBI989062	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-33270	CBI623842	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-33833	CBI528179	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-34092	CBI405963	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-34155	CBI982595	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-35135	CBI249266	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-36349	CBI35037	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-40878	CBI463970	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-4406	CBI435313	T	T	T	T	T	T	T	T	F	P	3	
285159800	OA90-9281	CBI434479	T	T	T	T	T	T	T	T	F	P	3	
287900000	OA90-10935	CBI67725	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-10954	CBI623785	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-10957	CBI639781	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-10960	CBI358608	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-10964	CBI157946	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-10966	CBI522133	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-10971	CBI712917	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-10973	CBI949455	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-10991	CBI462860	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-11001	CBI626020	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-11092	CBI213731	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-11095	CBI798490	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-11516	CBI773888	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-11848	CBI795233	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-13758	CBI723627	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-13765	CBI578454	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-13780	CBI826489	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-13788	CBI715486	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15787	CBI129560	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15789	CBI405934	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15791	CBI792369	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15793	CBI467893	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15795	CBI475129	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15798	CBI635311	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15800	CBI311014	F	F	F	F	F	F	F	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
287900000	OA90-15802	CBI674257	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15808	CBI578334	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15810	CBI690457	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15812	CBI788141	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15820	CBI190957	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15822	CBI699356	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15824	CBI294698	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15833	CBI898009	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15836	CBI825640	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-15839	CBI485682	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-17098	CBI731626	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-17393	CBI681987	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-18243	CBI779528	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-23011	CBI394856	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-23309	CBI647172	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-23329	CBI162933	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-23333	CBI344689	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-23338	CBI504180	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-24265	CBI297605	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-24931	CBI685573	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-2581	CBI191202	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-26369	CBI393462	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-26371	CBI657480	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-27329	CBI855151	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-27353	CBI553084	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-27355	CBI408190	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-27491	CBI214559	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-29220	CBI351385	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-31495	CBI857225	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-31500	CBI424914	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-31589	CBI811712	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-32629	CBI343129	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-32694	CBI885098	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-35398	CBI398819	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-35694	CBI398078	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-37412	CBI913291	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4146	CBI381031	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4151	CBI6871	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4153	CBI301664	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4155	CBI813729	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4158	CBI511777	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-41588	CBI190517	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4167	CBI858902	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4171	CBI920603	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4174	CBI360773	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4176	CBI260835	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4178	CBI589332	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4181	CBI515616	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4183	CBI949929	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4187	CBI115777	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4189	CBI653773	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4191	CBI524171	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4193	CBI900536	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4197	CBI8166.5	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4203	CBI276628	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4205	CBI633727	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-42372	CBI446420	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-42376	CBI833200	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-42450	CBI370090	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-42960	CBI152118	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-42966	CBI460017	F	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV11	ENV12	ENV13	ENV14	ENV15	ENV16	ENV17	ENV18	ENV19	MAT_PROD	CASE	SUBCASE
287900000	OA90-42972	CBI794720	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-43324	CBI42974	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-43798	CBI349695	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4487	CBI479243	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-4569	CBI244397	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-5001	CBI568322	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-8483	CBI210311	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-8486	CBI452451	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-8506	CBI881743	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-8508	CBI207959	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-9622	CBI250326	F	F	F	F	F	F	F	F	F	P	3	
287900000	OA90-9624	CBI931750	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10658	CBI524632	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10663	CBI826014	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10672	CBI231091	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10676	CBI260683	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10679	CBI966204	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10897	CBI339363	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10900	CBI661597	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10904	CBI444954	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10908	CBI622070	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10911	CBI510207	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10913	CBI692375	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10916	CBI192060	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10920	CBI518525	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10923	CBI643320	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10927	CBI474306	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10930	CBI454180	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10932	CBI354767	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-10977	CBI716048	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-11304	CBI365683	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-12208	CBI475793	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-13784	CBI31868	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-1539	CBI234689	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-1868	CBI731625	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-1870	CBI916477	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-1876	CBI587192	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-1880	CBI667800	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-1884	CBI768787	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-20165	CBI742832	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-23297	CBI756161	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-23302	CBI643672	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-23372	CBI190735	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-23382	CBI278135	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-23826	CBI25625	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-23836	CBI31982	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-23854	CBI926530	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-23858	CBI719287	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-23865	CBI747231	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-23868	CBI645256	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-23873	CBI347686	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-23881	CBI445077	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-24277	CBI117789	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-24283	CBI820141	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-24285	CBI814995	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-24347	CBI605193	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-24527	CBI682114	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-25254	CBI477874	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-25256	CBI819175	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-25987	CBI346399	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-26072	CBI22877.	F	F	F	F	F	F	F	F	F	P	3	

Appendix B  
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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
287950000	OA90-26115	CBI631777	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-2645	CBI891674	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-27347	CBI427868	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-29732	CBI315966	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-29739	CBI619079	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-32066	CBI696066	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-32070	CBI888919	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-32077	CBI532323	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-32080	CBI766796	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-32098	CBI440211	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-32108	CBI464999	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-32124	CBI518555	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-33769	CBI829343	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-33773	CBI882359	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-33898	CBI430488	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-33906	CBI585880	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-34271	CBI826964	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-34282	CBI687930	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-34317	CBI988228	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-34742	CBI390537	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-37862	CBI236683	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-38658	CBI914286	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-42339	CBI366620	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-42772	CBI169248	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-42785	CBI16723	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-42788	CBI637900	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-42791	CBI322388	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-42831	CBI811251	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-43821	CBI937708	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4479	CBI285548	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4499	CBI542412	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4505	CBI225522	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4510	CBI116054	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4518	CBI862629	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4523	CBI596986	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4530	CBI559	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4539	CBI676214	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4542	CBI55532	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4551	CBI768533	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4554	CBI356851	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4562	CBI411171	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4578	CBI30257	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-4587	CBI233994	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-8083	CBI987743	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-8308	CBI530358	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-9215	CBI233704	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-9226	CBI151179	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-9230	CBI331623	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-9234	CBI713018	F	F	F	F	F	F	F	F	F	P	3	
287950000	OA90-9239	CBI542649	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10642	CBI441708	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10653	CBI216521	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10868	CBI392875	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10871	CBI184417	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10873	CBI991060	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10877	CBI133432	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10884	CBI966425	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10887	CBI358208	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10938	CBI900900	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10940	CBI342351	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10947	CBI790508	F	F	F	F	F	F	F	F	F	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
287960000	OA90-10949	CBI333513	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10975	CBI859408	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10989	CBI500321	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-10998	CBI947079	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11016	CBI90440	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11020	CBI785720	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11029	CBI551151	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11032	CBI941888	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11035	CBI390645	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11038	CBI602107	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11041	CBI441317	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11047	CBI246292	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11060	CBI121327	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11063	CBI50523	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11109	CBI330567	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11294	CBI336804	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11298	CBI921556	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11300	CBI805840	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11307	CBI37727	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-11514	CBI457000	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-13283	CBI580324	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-1532	CBI165560	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-1534	CBI532245	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-1543	CBI825583	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-1546	CBI208209	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-1548	CBI456581	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-16397	CBI121635	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-16430	CBI138465	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-18334	CBI697179	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-18337	CBI484225	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-18340	CBI230622	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-18815	CBI299192	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-20162	CBI577625	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-20187	CBI224323	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-20202	CBI706470	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-20204	CBI536676	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-20221	CBI936027	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-20228	CBI57941	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-20230	CBI155867	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-20237	CBI485680	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-21714	CBI770646	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-21736	CBI932403	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-21739	CBI797931	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-21741	CBI456381	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-21743	CBI162541	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-23891	CBI406122	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-24166	CBI19169.	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-25989	CBI610433	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-25991	CBI30805.	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-25999	CBI708354	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26001	CBI877576	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26006	CBI304256	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26008	CBI426323	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26045	CBI163020	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26047	CBI52800	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26052	CBI357989	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26054	CBI221215	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26056	CBI422080	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26060	CBI957785	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26062	CBI220136	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26064	CBI437896	F	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
287960000	OA90-26077	CBI637687	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26082	CBI800369	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26086	CBI41812	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26088	CBI560224	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26090	CBI610227	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26098	CBI834967	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26100	CBI251343	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26102	CBI609695	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26108	CBI329803	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26117	CBI338582	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26119	CBI373157	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26133	CBI833315	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26135	CBI957553	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26137	CBI485160	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26139	CBI482584	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26141	CBI496321	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26143	CBI270587	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26145	CBI892110	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26147	CBI880400	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26149	CBI406414	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26151	CBI96848	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26153	CBI175816	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26155	CBI647442	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26157	CBI909106	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-26169	CBI333294	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-29718	CBI80802	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-29727	CBI790466	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-29914	CBI659543	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-30008	CBI995396	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-3119	CBI915251	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-3121	CBI988535	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-3123	CBI227023	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-3127	CBI192162	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-3131	CBI139223	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-31575	CBI834045	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-31577	CBI742478	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-31579	CBI176367	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-31581	CBI87139	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-31594	CBI843180	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-31607	CBI269492	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-31611	CBI842436	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-31954	CBI464561	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-32129	CBI733094	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-33885	CBI684740	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-34056	CBI830443	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-34301	CBI479558	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-34324	CBI576381	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-37431	CBI336857	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-37433	CBI168079	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-38445	CBI202835	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-40975	CBI61470	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-42444	CBI12890	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-42821	CBI118871	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-4384	CBI726040	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-4535	CBI9295	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-837	CBI482757	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-8496	CBI56366	F	F	F	F	F	F	F	F	F	P	3	
287960000	OA90-8498	CBI912142	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-10571	CBI847684	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-10573	CBI774401	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-10575	CBI831412	F	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
287970000	OA90-10577	CBI424828	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-10582	CBI712662	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-10995	CBI467526	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-11005	CBI785366	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-11007	CBI52492	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-11053	CBI359308	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-11057	CBI45822	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-11518	CBI969911	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-1514	CBI877272	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-15157	CBI58833.	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-15776	CBI630941	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-15778	CBI412807	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-15781	CBI740735	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-15783	CBI939274	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-15785	CBI904279	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-15817	CBI191254	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-15827	CBI557017	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-15830	CBI972334	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-18247	CBI180091	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-18251	CBI469099	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-18253	CBI80587	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-18255	CBI275015	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-18273	CBI59035	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-18275	CBI329056	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-18277	CBI774072	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-18300	CBI969130	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-18302	CBI143878	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-18332	CBI530940	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-18644	CBI882074	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-19739	CBI803503	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-19742	CBI401088	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-19752	CBI218660	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-19756	CBI533940	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-19759	CBI285859	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-19761	CBI575588	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-19765	CBI270377	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-20192	CBI620864	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-23556	CBI16876	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-23583	CBI445398	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-23585	CBI137875	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-23588	CBI527952	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-23843	CBI774210	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-23896	CBI410017	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-23898	CBI845102	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-23900	CBI739905	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-23997	CBI287114	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-24031	CBI925169	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-25594	CBI967059	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-25596	CBI59303	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-25598	CBI115415	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-25603	CBI337614	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-25606	CBI742434	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-25608	CBI670543	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-25610	CBI837121	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-25612	CBI889771	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-29003	CBI674810	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-32084	CBI624994	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-32086	CBI542018	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-32091	CBI332574	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-32093	CBI736632	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-33848	CBI657971	F	F	F	F	F	F	F	F	F	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
287970000	OA90-33853	CBI823465	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-37963	CBI804146	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-41250	CBI621552	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-4492	CBI398351	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-9719	CBI5946	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-9785	CBI337454	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-9849	CBI404537	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-9867	CBI69468	F	F	F	F	F	F	F	F	F	P	3	
287970000	OA90-9871	CBI641597	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-10980	CBI880364	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-10983	CBI870309	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-10986	CBI518369	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-15183	CBI875404	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-15186	CBI862232	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-15188	CBI439701	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-15190	CBI41930	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-15192	CBI163695	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-15195	CBI685971	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-15198	CBI473149	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-15201	CBI456270	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-15204	CBI862407	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-15207	CBI464677	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-18345	CBI273106	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-2178	CBI489046	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-2180	CBI272462	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-22962	CBI140023	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-2319	CBI446764	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-23576	CBI312055	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-29454	CBI635929	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-29485	CBI456960	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-31910	CBI446825	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-32243	CBI361243	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-33214	CBI766365	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-33301	CBI473176	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-33303	CBI694249	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-38443	CBI871198	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-42603	CBI194811	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-5349	CBI719706	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-9259	CBI3108	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-9670	CBI57691.	F	F	F	F	F	F	F	F	F	P	3	
287988500	OA90-9936	CBI292487	F	F	F	F	F	F	F	F	F	P	3	
287990000	OA90-10041	CBI765302	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-10158	CBI743722	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-12128	CBI342218	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-13443	CBI431657	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-13755	CBI336325	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-14426	CBI642673	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-17123	CBI338549	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-19944	CBI138115	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-19953	CBI547794	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-19956	CBI23623	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-20183	CBI160985	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-21627	CBI230602	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-21630	CBI600745	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-23340	CBI54060	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-23816	CBI997704	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-24926	CBI542085	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-2558	CBI406548	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-2560	CBI926965	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-26037	CBI62798	T	T	T	T	T	T	T	T	T	F	P	3
287990000	OA90-28732	CBI509173	T	T	T	T	T	T	T	T	T	F	P	3

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
287990000	OA90-29860	CBI790827	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-30031	CBI754847	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-30207	CBI329166	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-30333	CBI298259	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-30377	CBI154417	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-31902	CBI657978	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-32088	CBI508030	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-32267	CBI333186	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-32294	CBI207808	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-32324	CBI58319	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-32588	CBI250991	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-32625	CBI530360	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-32699	CBI458964	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-32946	CBI475705	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-34291	CBI9447	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-34734	CBI774353	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-35409	CBI431847	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-35416	CBI30520	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-35421	CBI73124	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-35778	CBI992452	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-35783	CBI839898	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-35787	CBI385949	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-35810	CBI889285	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-35813	CBI775584	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-37846	CBI16336	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-38667	CBI722503	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-42420	CBI863579	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-42424	CBI642679	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-42605	CBI452801	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-42608	CBI546487	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-42798	CBI129573	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-43040	CBI922096	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-43043	CBI1777	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-43047	CBI171424	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-43346	CBI241153	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-582	CBI314030	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-638	CBI816368	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-7383	CBI666648	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-7513	CBI800373	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-7522	CBI382165	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-8086	CBI59083	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-8591	CBI610631	T	T	T	T	T	T	T	T	F	P	3	
287990000	OA90-9210	CBI351095	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-10045	CBI50455	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-10128	CBI644296	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-10773	CBI865896	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-12117	CBI735914	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-13735	CBI760320	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-16329	CBI267974	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-17498	CBI979228	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-18058	CBI570347	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-1878	CBI221507	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-19939	CBI529717	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-19960	CBI485716	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-19966	CBI730033	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-20014	CBI781554	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-21591	CBI794711	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-21595	CBI319064	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-22102	CBI872453	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-22956	CBI4230	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-22997	CBI69447	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
287991000	OA90-23008	CBI89556	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-23024	CBI493378	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-23375	CBI388967	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-23878	CBI739946	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-24354	CBI402462	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-24923	CBI282981	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-2550	CBI582204	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-26029	CBI123448	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-28735	CBI771480	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-29387	CBI445949	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-29424	CBI877155	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-29445	CBI703294	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-29480	CBI576569	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-29769	CBI337826	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-30144	CBI122010	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-30178	CBI121397	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-30310	CBI678797	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-30315	CBI61473	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-30327	CBI894046	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-31479	CBI253961	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-31483	CBI828443	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-31847	CBI806424	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-32301	CBI465453	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-32526	CBI706091	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-32529	CBI289033	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-32535	CBI533441	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-32554	CBI500154	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-32562	CBI107881	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-32585	CBI838642	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-32598	CBI493162	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-32612	CBI92197	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-32681	CBI774112	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-32696	CBI940170	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-33173	CBI877251	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-33760	CBI46320.	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-33888	CBI295651	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-34727	CBI496184	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-35412	CBI325196	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-35816	CBI259552	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-36524	CBI352428	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-37414	CBI324746	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-3819	CBI830199	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-38590	CBI453231	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-38684	CBI287290	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-41571	CBI983844	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-41575	CBI9333	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-41579	CBI735449	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-41584	CBI551768	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-42213	CBI459027	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-42342	CBI780718	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-42345	CBI53618	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-42446	CBI784320	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-42718	CBI580086	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-42803	CBI219427	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-42818	CBI85916	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-42977	CBI547458	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-42980	CBI4549.5	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-42983	CBI953792	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-43136	CBI173478	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-4548	CBI625117	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-4851	CBI237506	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
287991000	OA90-5438	CBI283111	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-6976	CBI950356	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-7075	CBI244148	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-7847	CBI767772	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-7960	CBI173575	T	T	T	T	T	T	T	T	F	P	3	
287991000	OA90-8261	CBI633577	T	T	T	T	T	T	T	T	F	P	3	
287991200	RAD03701	Total Release Insect Fogger	T	T	T	T	T	T	T	T	F	P	3	
287991200	RAD03702	Total Release Insect Fogger	T	T	T	T	T	T	T	T	F	P	3	
287991200	RAD03703	Total Release Insect Fogger	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-10120	CBI198046	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-13467	CBI707922	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-16368	CBI24326	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-17519	CBI367684	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-17523	CBI311501	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-19000	CBI764491	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-19949	CBI982299	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-20044	CBI282690	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-20128	CBI44075	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-21516	CBI52353	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-21519	CBI339980	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-21534	CBI895857	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-2355	CBI95552.	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-23681	CBI596897	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-23883	CBI176872	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-24402	CBI882006	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-2511	CBI855041	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-2529	CBI419759	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-25551	CBI145622	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-26015	CBI695289	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-26020	CBI383194	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-28738	CBI116075	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-29954	CBI91924	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-30226	CBI628522	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-30230	CBI121255	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-31189	CBI77537	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-31504	CBI736427	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-32103	CBI442334	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-32133	CBI52657	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-32270	CBI938167	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-32274	CBI808271	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-32566	CBI901533	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-32615	CBI317466	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-32620	CBI501796	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-32674	CBI242555	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-32677	CBI486945	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-32687	CBI581071	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-32692	CBI278742	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-33754	CBI453902	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-33894	CBI164589	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-34714	CBI178791	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-34855	CBI393618	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-35734	CBI992643	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-35805	CBI357251	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-35996	CBI721757	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-38449	CBI150092	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-38660	CBI792684	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-39550	CBI954472	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-4209	CBI121404	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42358	CBI247524	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42364	CBI355404	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42368	CBI788712	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
287992000	OA90-42410	CBI161154	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42428	CBI681726	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42795	CBI434675	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42828	CBI358217	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42889	CBI197780	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42892	CBI274662	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42896	CBI306034	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42900	CBI560087	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42904	CBI510934	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42908	CBI660786	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42914	CBI197092	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-4292	CBI319669	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-42944	CBI131919	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-7127	CBI399414	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-8018	CBI779440	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-8129	CBI38043	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-8185	CBI825825	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-8311	CBI341785	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-8318	CBI371392	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-8321	CBI981239	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-8324	CBI203499	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-8327	CBI66122.	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-8568	CBI83767	T	T	T	T	T	T	T	T	F	P	3	
287992000	OA90-9163	CBI831889	T	T	T	T	T	T	T	T	F	P	3	
287993000	OA90-11086	CBI981716	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-12893	CBI680073	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-13465	CBI368362	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-13680	CBI346181	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-23293	CBI112631	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-23343	CBI483031	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-23346	CBI30241	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-23453	CBI434382	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-24489	CBI858289	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-2532	CBI824866	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-26298	CBI487737	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-26344	CBI592872	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-2793	CBI239000	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-32643	CBI430579	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-33544	CBI253947	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-34303	CBI830472	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-34307	CBI238366	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-34311	CBI633108	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-34469	CBI916250	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-34472	CBI352662	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-34731	CBI560528	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-34744	CBI646654	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-37922	CBI410711	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-38634	CBI558208	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-41087	CBI802667	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-41768	CBI398356	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-41770	CBI491874	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-42347	CBI941351	F	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-42380	CBI595082	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-42707	CBI459464	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-4923	CBI103803	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-7470	CBI382296	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-8100	CBI108190	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-8105	CBI598325	T	F	F	F	F	F	F	F	F	P	3	
287993000	OA90-9665	CBI834776	T	F	F	F	F	F	F	F	F	P	3	
287993000	RAD03801	Insect Repellant Spray	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-19899	CBI937845	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
287994000	OA90-23388	CBI564405	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-23390	CBI599628	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-23393	CBI265511	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-23396	CBI416212	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-23398	CBI974611	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-32537	CBI821860	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-32539	CBI218156	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-32541	CBI666200	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-32592	CBI117432	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-32594	CBI378792	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-32596	CBI315159	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-41763	CBI521189	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-43360	CBI606383	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-43363	CBI492739	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-43365	CBI819492	T	F	F	F	F	F	F	F	F	P	3	
287994000	OA90-43368	CBI249753	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-11098	CBI114343	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-13772	CBI518538	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-13775	CBI598922	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-17114	CBI267798	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-17294	CBI46212	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-18160	CBI170399	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-18171	CBI196828	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-18175	CBI874355	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-18177	CBI161221	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-19941	CBI30168	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-23325	CBI855158	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-23364	CBI690210	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-23370	CBI468167	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-24823	CBI520274	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-26166	CBI256640	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-29951	CBI132917	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-32380	CBI48618	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-32551	CBI527410	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-32683	CBI172049	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-33171	CBI839739	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-33177	CBI485125	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-33181	CBI733834	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-33183	CBI515901	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-33185	CBI522360	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-33187	CBI944941	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-33189	CBI789698	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-34729	CBI775960	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-35402	CBI938621	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-35404	CBI108012	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-35419	CBI70167	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-35425	CBI170616	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-41318	CBI911053	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-4137	CBI454237	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-42351	CBI532973	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-42355	CBI26972	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-42580	CBI929847	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-42585	CBI282475	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-42588	CBI494958	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-42590	CBI983627	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-42704	CBI954826	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-42777	CBI978140	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-43819	CBI451083	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-4474	CBI847497	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-7466	CBI884457	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-7476	CBI61304	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
287994500	OA90-7479	CBI728599	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-7483	CBI826891	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-7486	CBI66443	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-7489	CBI486426	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-7508	CBI280500	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-7519	CBI473678	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-8005	CBI796977	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-8957	CBI971792	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-9040	CBI819380	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-9054	CBI287942	T	F	F	F	F	F	F	F	F	P	3	
287994500	OA90-9058	CBI929260	T	F	F	F	F	F	F	F	F	P	3	
289135500	N0506015	water-based nonweatherproof adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000276	Weldwood Spray 'n Glue (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000277	3M General Trim Adhesive (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000279	Trewax Beauty Sealer (adhesive)	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000280	Duro Contact Cement	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000481	Multi Purpose Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000482	Hold It! (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000483	Duro Spray Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000484	Sta Put (adhesive)	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000485	Vinyl Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000486	Automotive Goop	T	F	F	F	F	F	F	F	F	P	3	
289140000	IA000487	Qualco Contact Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000488	Plastic Filler Aluminum	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000489	Weather Strip Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000490	Weldwood Touch N Glue	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000491	Shoe Goo	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000492	Plastic Mender Magic	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000494	Weldwood Contact Cement	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000495	Grip Contact Cement	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000646	Gila Spray Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000647	Tiger Grip Adhesive (spray)	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000648	Filtercoat Adhesive (spray)	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000649	Scotch Spray Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000650	Super Strength Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000651	Duro White Plastic Rubber	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000652	Duro Vinyl Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000653	Duro Stop It Threadlock	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000654	Devcon Rubber Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000780	Spray Disc Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000781	NYBCO Spray Glue	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000782	Howe Spray Seal Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000783	Super 77 Spray Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000784	Wilhold Contact Cement	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000785	Camel Boot Cement	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000786	Rearview Mirror Adhesive	F	F	F	F	F	F	F	F	T	P	3	
289140000	IA000787	Rearview Mirror Adh Primer	F	F	F	F	F	F	F	F	T	P	3	
289140000	IA000789	Duro Auto Trim Activator	F	F	F	F	F	F	F	F	F	P	3	
289140000	IA000790	Universal Cement	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000791	Macco Liquid Nails	T	T	T	T	T	F	T	F	F	P	3	
289140000	IA000792	Duro Contact Cement	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000793	Duro Contact Cement	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000945	3M Disc Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000946	General Trim Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000947	Duro Black Plastic Rubber	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA000948	Success Steel Repair	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001094	3M Spray Trim Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001095	3M Super Trim Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001096	Tremco Trim Adhesvie	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001097	Trim Bond Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001098	Spray Glue Adhesive	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289140000	IA001099	Glitter Glue	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001100	174 Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001101	Krylon Spray Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001102	Spray Glue Magic	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001103	Rear View Mirror Adhesive	F	F	F	F	F	F	F	F	T	P	3	
289140000	IA001104	Rear View Mirror Primer	F	F	F	F	F	F	F	F	T	P	3	
289140000	IA001105	Elmer's Wonder Bond	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001107	Minute Bond Primer	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001108	Super Strength Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001149	Gen Purpose Adhesive	T	T	T	T	T	T	T	T	F	P	3	
289140000	IA001165	Elmer's Contact Cement	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-10240	CBI917079	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-11523	CBI837201	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-11525	CBI39644	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-11527	CBI748074	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-11533	CBI146010	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1381	CBI19838	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14003	CBI979152	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14005	CBI149043	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14009	CBI17850	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14011	CBI639747	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14017	CBI146473	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14023	CBI137713	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14029	CBI824061	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14063	CBI207492	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14065	CBI533191	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14093	CBI875639	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14223	CBI756826	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14227	CBI885211	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14232	CBI514209	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14253	CBI705015	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14307	CBI875411	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14311	CBI246684	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14329	CBI439337	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14347	CBI332268	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-14925	CBI71001	F	F	F	F	F	F	F	F	F	P	3	
289140000	OA90-14927	CBI537350	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15081	CBI932058	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15849	CBI52480	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15851	CBI591693	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15853	CBI454629	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15855	CBI798603	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15857	CBI464031	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15859	CBI304446	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15861	CBI557740	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15863	CBI55584	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15866	CBI944809	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15868	CBI906520	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15870	CBI152087	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15872	CBI258042	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15874	CBI84399.	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15879	CBI743371	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15883	CBI234803	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15888	CBI619903	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15892	CBI94004	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15896	CBI866761	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15900	CBI560542	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15903	CBI891872	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15907	CBI482495	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15911	CBI309469	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15914	CBI455479	T	T	T	T	T	T	T	T	F	P	3	



Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289140000	OA90-15919	CBI171115	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15924	CBI414711	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15929	CBI992546	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15933	CBI908750	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15937	CBI393461	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15941	CBI750699	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15945	CBI90599	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15949	CBI689432	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15952	CBI65767	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15955	CBI905562	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15960	CBI296890	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15964	CBI843909	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15968	CBI285603	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15972	CBI431624	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15976	CBI803117	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15980	CBI513165	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15984	CBI492030	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15988	CBI580802	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15993	CBI307672	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-15997	CBI740784	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16002	CBI645043	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16006	CBI26378	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16011	CBI593852	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16014	CBI963022	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16018	CBI86433	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16021	CBI228292	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16024	CBI777896	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16028	CBI112069	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16032	CBI580779	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16036	CBI445451	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16040	CBI34124	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16042	CBI918349	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16045	CBI790252	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16050	CBI760993	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16053	CBI617374	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16056	CBI154472	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16061	CBI734704	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16065	CBI645998	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16068	CBI987682	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16073	CBI100224	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16077	CBI532882	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16082	CBI677697	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16136	CBI566128	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16176	CBI895721	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16181	CBI881224	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16188	CBI337135	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16191	CBI993729	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16444	CBI248611	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16446	CBI17811	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16467	CBI671713	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16692	CBI522647	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-16697	CBI240635	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1693	CBI43860	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1709	CBI530346	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-17189	CBI382917	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-17194	CBI788866	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-17197	CBI316965	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1720	CBI633638	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-17201	CBI579574	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-17204	CBI378026	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-177	CBI128633	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289140000	OA90-179	CBI524905	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-181	CBI548354	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1817	CBI296389	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-183	CBI767540	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-18527	CBI993055	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1856	CBI587680	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1858	CBI54967	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1860	CBI661064	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1862	CBI2259	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1866	CBI827437	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1872	CBI1513	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-18753	CBI26922	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-18760	CBI386369	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1882	CBI270536	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1895	CBI267828	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1902	CBI819632	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1907	CBI455266	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1911	CBI103765	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-19142	CBI84472	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-19146	CBI648556	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-19153	CBI205449	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1916	CBI516779	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-19162	CBI706269	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1923	CBI294326	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1933	CBI691609	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1937	CBI329059	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-19588	CBI74160	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1970	CBI346895	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-1974	CBI68855	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20059	CBI751548	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20277	CBI428177	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20283	CBI178570	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20285	CBI121608	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20287	CBI593488	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20291	CBI703942	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20296	CBI187664	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20299	CBI867897	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20301	CBI295331	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20303	CBI849068	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20305	CBI444812	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20308	CBI838557	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20311	CBI735323	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-207	CBI862979	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20825	CBI116996	F	F	F	F	F	F	F	F	T	P	3	
289140000	OA90-20830	CBI953101	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20833	CBI111389	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20839	CBI253267	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20859	CBI289869	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20864	CBI983006	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20877	CBI839931	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-20895	CBI552826	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21001	CBI374742	F	F	F	F	F	F	F	F	T	P	3	
289140000	OA90-21235	CBI286972	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21570	CBI404650	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21852	CBI455130	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21855	CBI262107	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21860	CBI627774	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21885	CBI6409	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21894	CBI429194	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21923	CBI594350	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21927	CBI904255	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289140000	OA90-21930	CBI364874	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21934	CBI993729	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21939	CBI558086	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21943	CBI206996	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21952	CBI932180	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21956	CBI86174	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21959	CBI91442	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21961	CBI67531	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21974	CBI655091	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21983	CBI8863	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21990	CBI626194	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-21993	CBI633000	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22367	CBI667405	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22369	CBI569243	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22373	CBI74078	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22375	CBI60870	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22378	CBI442455	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22382	CBI249794	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22388	CBI362659	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22392	CBI124054	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22398	CBI568570	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22402	CBI553748	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22414	CBI128312	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22416	CBI527838	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22422	CBI723006	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22430	CBI688298	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22436	CBI607675	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22441	CBI238880	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-22497	CBI654415	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-23975	CBI133503	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-23979	CBI332577	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-23980	CBI458064	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24052	CBI988936	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24054	CBI420811	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24058	CBI195437	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24062	CBI963688	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24069	CBI341855	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24074	CBI136062	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24077	CBI419635	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24081	CBI657893	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24084	CBI349551	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24092	CBI947870	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24098	CBI126449	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24102	CBI209317	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24108	CBI843069	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24110	CBI426923	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24114	CBI819515	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24122	CBI297006	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24129	CBI138789	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24132	CBI559097	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24134	CBI516048	F	F	F	F	F	F	F	F	T	P	3	
289140000	OA90-24140	CBI739037	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24158	CBI301768	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24214	CBI165281	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-2422	CBI932446	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-2435	CBI939083	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-2444	CBI819415	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-24682	CBI593715	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-2489	CBI300873	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-251	CBI944833	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-25298	CBI197298	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289140000	OA90-25302	CBI225342	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-25510	CBI285405	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-25512	CBI79489	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-25514	CBI688459	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-25519	CBI796369	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-25528	CBI731325	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-25702	CBI213766	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-26198	CBI116806	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-26203	CBI564219	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-26206	CBI857694	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-26209	CBI630954	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-26211	CBI393339	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-27623	CBI469579	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-27627	CBI660580	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-27649	CBI390099	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-27653	CBI315257	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-27658	CBI425513	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-27662	CBI638975	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-27667	CBI25559	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-27680	CBI874013	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-27699	CBI622221	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-27722	CBI976220	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-2796	CBI857414	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-2800	CBI295006	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-28018	CBI926729	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-2802	CBI906156	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-28081	CBI402200	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-2823	CBI308060	F	F	F	F	F	F	F	F	F	P	3	
289140000	OA90-2826	CBI41243	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-2830	CBI311724	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-2835	CBI883373	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-28425	CBI745190	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-28504	CBI960935	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-28507	CBI980087	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-28633	CBI132538	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-28645	CBI929163	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-28652	CBI13827	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-29009	CBI175228	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-29012	CBI89011	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-29019	CBI28033	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-29341	CBI59552	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-2958	CBI42520	T	T	T	T	T	T	T	T	T	P	3	
289140000	OA90-300	CBI658996	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-30096	CBI855770	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-30184	CBI226011	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-30445	CBI734503	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-30448	CBI775454	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-30455	CBI163509	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-30471	CBI316560	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-30489	CBI292464	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-30503	CBI768114	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-306	CBI20372	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-30901	CBI990120	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31200	CBI295632	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31272	CBI967997	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31274	CBI695737	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31278	CBI904763	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31280	CBI520846	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31282	CBI582255	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31287	CBI729043	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31288	CBI790129	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289140000	OA90-31292	CBI802020	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31296	CBI845650	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31299	CBI687736	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31305	CBI887086	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31308	CBI404329	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31314	CBI216453	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31321	CBI561378	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31323	CBI916768	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31331	CBI269856	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31339	CBI103525	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31342	CBI146798	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31348	CBI240677	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31351	CBI384222	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31358	CBI824971	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31365	CBI528549	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31370	CBI59369	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31373	CBI226791	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31378	CBI353451	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31383	CBI603838	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31620	CBI935407	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31624	CBI550329	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31626	CBI496398	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31630	CBI491744	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31632	CBI26808	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-31636	CBI934911	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-321	CBI497051	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-328	CBI604589	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-33124	CBI436449	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-33128	CBI960153	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-33132	CBI167511	F	F	F	F	F	F	F	F	F	P	3	
289140000	OA90-33136	CBI437276	F	F	F	F	F	F	F	F	F	P	3	
289140000	OA90-33139	CBI764833	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-33141	CBI958947	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-333	CBI819405	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-338	CBI534973	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-342	CBI883778	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-346	CBI791515	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-34780	CBI927601	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-34935	CBI207139	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35586	CBI786384	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35589	CBI568625	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35592	CBI762418	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35594	CBI291401	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35596	CBI890528	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35599	CBI277368	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35602	CBI369130	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35604	CBI961516	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35606	CBI823370	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35608	CBI207806	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35610	CBI900847	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35612	CBI949372	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35614	CBI930055	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35616	CBI536796	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35618	CBI601847	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35620	CBI221898	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35622	CBI76076	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35625	CBI492570	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-357	CBI481020	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35793	CBI398727	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35921	CBI893105	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-35936	CBI221935	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289140000	OA90-35970	CBI891664	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-36100	CBI676113	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-36640	CBI755226	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-36642	CBI361593	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-36646	CBI863729	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-36650	CBI5665901	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-36656	CBI118781	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-36660	CBI793083	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-36665	CBI916292	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-36669	CBI622982	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37225	CBI787250	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37229	CBI903565	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37231	CBI16360.	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37239	CBI301946	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37241	CBI180384	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37243	CBI230360	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37246	CBI725911	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37253	CBI173283	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37257	CBI892836	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37263	CBI85786	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37266	CBI125325	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37268	CBI659095	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37277	CBI804440	F	F	F	F	F	F	F	F	F	P	3	
289140000	OA90-37282	CBI327627	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37285	CBI25258	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37293	CBI790487	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37295	CBI318838	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37297	CBI473025	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-37307	CBI593940	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-38755	CBI352057	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-38760	CBI194944	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-38763	CBI141738	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-38766	CBI897602	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-389	CBI271901	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-39172	CBI347626	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-39176	CBI89077.	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-39182	CBI384401	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-39185	CBI506205	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-39189	CBI934604	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-39192	CBI642256	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-39194	CBI558408	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-39197	CBI605843	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-39204	CBI60660	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-39210	CBI316033	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-39218	CBI370272	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-39222	CBI701673	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-4022	CBI437607	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-4028	CBI659904	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-4034	CBI767721	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-4040	CBI568895	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-4054	CBI920054	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-40891	CBI364930	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-40943	CBI412151	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-40949	CBI247946	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-41263	CBI298014	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-41267	CBI870990	T	T	F	F	T	F	F	F	F	P	3	
289140000	OA90-41272	CBI284220	T	T	F	F	T	F	F	F	F	P	3	
289140000	OA90-41274	CBI229218	T	T	F	F	T	F	F	F	F	P	3	
289140000	OA90-41276	CBI545654	T	T	F	F	T	F	F	F	F	P	3	
289140000	OA90-41278	CBI641267	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-41282	CBI496365	T	T	T	T	T	T	T	T	F	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289140000	OA90-413	CBI157832	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-41302	CBI589890	T	T	F	F	T	F	F	F	F	P	3	
289140000	OA90-420	CBI444616	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-42183	CBI158460	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-42185	CBI158385	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-42309	CBI189262	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-42311	CBI318843	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-42631	CBI477157	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-43095	CBI207701	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-4725	CBI7494	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-4727	CBI759586	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-4904	CBI817685	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-4908	CBI250004	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-491	CBI941857	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-4912	CBI498205	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-497	CBI450786	T	T	F	F	T	F	F	F	F	P	3	
289140000	OA90-504	CBI343954	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-5077	CBI350338	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-510	CBI965324	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-516	CBI379503	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-5171	CBI384765	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-521	CBI82224	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-526	CBI300116	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-5272	CBI384919	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-531	CBI533647	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-5318	CBI993087	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-534	CBI715239	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-538	CBI42895	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-540	CBI891716	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-542	CBI289350	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-5762	CBI580436	T	T	F	F	T	F	F	F	F	P	3	
289140000	OA90-5764	CBI622443	T	T	F	F	T	F	F	F	F	P	3	
289140000	OA90-6573	CBI218932	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6686	CBI492350	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6700	CBI698161	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6702	CBI55213	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6709	CBI493567	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6713	CBI124272	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6717	CBI494672	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6723	CBI385220	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6728	CBI635499	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6734	CBI77318	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6736	CBI759244	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6741	CBI841659	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6744	CBI393183	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6765	CBI736051	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6767	CBI402786	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6769	CBI513286	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6772	CBI308216	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6774	CBI484005	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6777	CBI602819	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6823	CBI985137	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6830	CBI604038	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6834	CBI476717	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6836	CBI506792	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6838	CBI56446	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6841	CBI452223	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6845	CBI60930	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6857	CBI460734	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6862	CBI931110	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6878	CBI272341	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289140000	OA90-6885	CBI54830	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-6896	CBI398375	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8042	CBI334472	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8216	CBI879763	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8465	CBI899918	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8470	CBI886772	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8473	CBI962037	F	F	F	F	F	F	F	F	F	P	3	
289140000	OA90-8614	CBI222199	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8826	CBI864450	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8830	CBI839219	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8834	CBI744133	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8839	CBI136906	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8844	CBI943511	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8848	CBI21610	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8852	CBI949221	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8855	CBI482008	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8860	CBI604106	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8864	CBI757772	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8868	CBI147236	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8874	CBI691596	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8878	CBI824731	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8882	CBI827974	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8886	CBI80066	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8891	CBI589395	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8893	CBI190589	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8897	CBI409679	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8901	CBI127711	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8906	CBI978223	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8909	CBI3233	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-8914	CBI934001	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9107	CBI773186	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9109	CBI605483	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-913	CBI178492	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9189	CBI875410	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9269	CBI598265	F	F	F	F	F	F	F	F	F	P	3	
289140000	OA90-9446	CBI647271	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9448	CBI274471	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9450	CBI333736	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9452	CBI274627	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9454	CBI810856	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9456	CBI91554	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9458	CBI877418	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9460	CBI826123	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-956	CBI180069	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-960	CBI30295	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9684	CBI973016	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9701	CBI286498	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9707	CBI956786	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9710	CBI789858	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9712	CBI610193	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9716	CBI141378	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9727	CBI492544	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9753	CBI707521	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9771	CBI22594	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9775	CBI572780	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9783	CBI746706	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9806	CBI540556	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9809	CBI873334	T	T	T	T	T	T	T	T	F	P	3	
289140000	OA90-9853	CBI728548	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514001	epoxy adhesives for various surfaces	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514002	epoxy adhesives for various surfaces	T	T	T	T	T	T	T	T	F	P	3	





Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289141100	N0514065	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514066	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514067	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514068	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514069	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514070	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514071	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514072	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514073	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514074	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514075	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514076	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514077	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514078	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514079	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514080	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514081	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514082	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514083	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514084	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514085	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514086	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514087	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514088	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514089	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514090	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514091	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514092	epoxy general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514093	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514094	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514095	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514096	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514097	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514098	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514099	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514100	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514101	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514102	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514103	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514104	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514105	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514106	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514107	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514108	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514109	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514110	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	N0514111	epoxy general purpose coatings	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-16457	CBI817887	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-16459	CBI543856	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-16462	CBI880894	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-16465	CBI313781	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-16470	CBI346786	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-16473	CBI561635	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-16475	CBI277876	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-17152	CBI89	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-17155	CBI523770	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-17177	CBI19746	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-17179	CBI707314	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-17186	CBI462728	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-20850	CBI971218	T	T	T	T	T	T	T	T	F	P	3	
289141100	OA90-29113	CBI637209	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289141100	OA90-37251	CBI466792	T	T	T	T	T	T	T	T	F	P	3	
289142400	N0506001	water-based adhesive for formica to woo	T	T	T	T	T	T	T	T	F	P	3	
289144100	N0505009	water-base hi-tack H2O-resist adhesive	T	T	T	T	T	T	T	T	F	P	3	
289144100	N0505010	water-base hi-tack H2O-resist adhesive	T	T	T	T	T	T	T	T	F	P	3	
289144800	N0505002	water-based general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289144800	N0506010	water-base emul. base for adhesive/coat	T	T	T	T	T	T	T	T	F	P	3	
289144800	N0506011	water-base emul. base for adhesive/coat	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0501001	water-base polyvinyl-Cl wallcov adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0501002	water-base strng foam carp tile adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0501003	water-base weak foam carpt tile adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0503001	water-based fiber-flocking adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0503002	water-based fiber flocking adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0503003	water-based fiber flocking adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0503004	water-base fiber flock/laminat adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0503005	water-based flocking adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0503006	water-based flocking adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0503007	water-based flocking adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0503008	water-base flocking/laminating adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0503009	water-base flocking/laminating adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0503010	water-based foamable flocking adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0503011	water-based foamable flocking adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0505001	water-based general purpose adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0506002	water-based contact adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0506003	water-based contact adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0506004	water-based contact adhesive	T	T	T	T	T	T	T	T	F	P	3	
289145300	N0506005	water-based contact adhesive	T	T	T	T	T	T	T	T	F	P	3	
289147100	N0505005	water-based pressure-sensitive adhesive	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0505003	water-base gen. purpose laminat adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0505004	water-base gen. purpose laminat adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0505006	water-based hi-qual gen purpose adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0505007	water-based hi-qual gen purpose adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0505008	water-based hi-qual gen purpose adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0505011	water-based lo-cost hi-strength adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0505012	water-based lo-cost hi-strength adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0505013	water-based polyolefin adhesive	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0506006	water-base anion emul base for adhesive	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0506007	water-base cation emul base for adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0506008	water-base nonion emul base for adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0506009	water-base nonion emul base for adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0506012	water-base lo-\$ gasoline-resist adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0506013	water-base heat-seal lacqr-type adhesiv	T	T	T	T	T	T	T	T	F	P	3	
289149900	N0506014	water-based laminating adhesive	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-10171	CBI219881	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-1028	CBI578929	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-10384	CBI467934	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-10399	CBI163088	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-10565	CBI70244	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-1153	CBI592260	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-12852	CBI63350	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-13029	CBI189952	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-13797	CBI901213	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-13802	CBI472181	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-13808	CBI827639	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-13812	CBI381688	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-13814	CBI231490	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-13816	CBI875622	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-13818	CBI915096	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-13999	CBI18717	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-14021	CBI158021	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-14072	CBI238779	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-14074	CBI579485	T	T	T	T	T	T	T	T	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289170000	OA90-14076	CBI319334	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-14078	CBI909531	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-14931	CBI729008	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-14935	CBI710010	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-15043	CBI539366	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-158	CBI324199	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-16382	CBI671998	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-16484	CBI517158	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-16491	CBI660815	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-16504	CBI915455	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-167	CBI991386	F	F	F	F	F	F	F	F	T	P	3	
289170000	OA90-19136	CBI134047	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-19140	CBI115221	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-19166	CBI965296	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-19172	CBI267674	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-19178	CBI652161	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-19180	CBI495513	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-19586	CBI102732	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-202	CBI248317	F	F	F	F	F	F	F	F	T	P	3	
289170000	OA90-20842	CBI620609	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-20845	CBI57678	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-20856	CBI720739	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-20885	CBI101368	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-20942	CBI77629	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-20948	CBI311209	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-20951	CBI944185	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-20970	CBI494424	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-20978	CBI659896	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-20982	CBI112684	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-20984	CBI335558	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-216	CBI825157	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21862	CBI267009	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21865	CBI413725	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21868	CBI532808	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21872	CBI935233	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21875	CBI788274	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21878	CBI555275	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21888	CBI59030	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21897	CBI882919	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21900	CBI188808	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21903	CBI637265	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21906	CBI517088	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21912	CBI546280	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-21948	CBI176032	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-22396	CBI20001	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-22411	CBI679570	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-22420	CBI256730	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-22434	CBI214890	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-234	CBI129880	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-23706	CBI867098	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-23809	CBI972154	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-24117	CBI699007	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-24125	CBI847219	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-24153	CBI978643	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-24366	CBI392103	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-2481	CBI490263	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-25629	CBI641535	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-26026	CBI200796	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-26182	CBI683573	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-26184	CBI780065	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-26201	CBI534359	F	F	F	F	F	F	T	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289170000	OA90-26213	CBI881446	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-26216	CBI367821	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-26219	CBI923498	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27357	CBI283603	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27637	CBI938176	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27687	CBI637596	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27689	CBI646318	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27692	CBI552807	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27702	CBI482059	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27707	CBI900907	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27708	CBI73745	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27711	CBI807285	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27735	CBI376676	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27739	CBI59498	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27858	CBI653160	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-27868	CBI456460	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-29110	CBI152609	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-30433	CBI232932	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-30439	CBI499065	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-30452	CBI401932	T	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-30465	CBI116751	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-30468	CBI197664	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-30482	CBI940285	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-30496	CBI728762	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-30500	CBI112289	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-30506	CBI871069	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-31871	CBI952774	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-31882	CBI446841	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-31893	CBI204659	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-31948	CBI882345	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-3266	CBI622908	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-33126	CBI511524	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-34151	CBI951357	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-34153	CBI51908	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-351	CBI372148	F	F	F	F	F	F	F	F	F	T	P	3
289170000	OA90-36601	CBI887047	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-36630	CBI989930	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-36635	CBI919537	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-36638	CBI117955	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-36851	CBI367691	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-372	CBI554805	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-375	CBI484371	F	F	F	F	F	F	F	F	F	T	P	3
289170000	OA90-38355	CBI723246	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-38392	CBI266597	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-39200	CBI788940	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-39213	CBI241253	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-39215	CBI968782	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-39315	CBI195647	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-3960	CBI242224	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-42430	CBI277522	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-42624	CBI894671	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-42627	CBI521791	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-595	CBI613507	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-6851	CBI408025	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-6854	CBI224176	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-6866	CBI244848	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-6901	CBI260550	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-713	CBI353641	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-716	CBI762575	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-803	CBI545779	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-813	CBI316888	T	T	T	T	T	T	T	T	F	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289170000	OA90-8430	CBI895618	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-8438	CBI287051	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-909	CBI416006	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-9168	CBI377516	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-9263	CBI424100	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-9689	CBI920041	F	F	F	F	F	F	F	F	F	P	3	
289170000	OA90-9705	CBI31651	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-9796	CBI604175	T	T	T	T	T	T	T	T	F	P	3	
289170000	OA90-9851	CBI153446	T	T	T	T	T	T	T	T	F	P	3	
289171100	EJ040001	oleoresinous sealant	T	T	T	T	T	T	T	T	F	P	3	
289171100	EJ040002	oleoresinous sealant	T	T	T	T	T	T	T	T	F	P	3	
289171100	N0520001	isobutene-based architect caulk compoun	T	T	T	T	T	T	T	T	F	P	3	
289171100	N0520002	polybutene-based low-cost caulk compoun	T	T	T	T	T	T	T	T	F	P	3	
289171100	N0520003	polybutene-based low cost caulk compoun	T	T	T	T	T	T	T	T	F	P	3	
289171100	N0520004	polybutene-based low cost caulk compoun	T	T	T	T	T	T	T	T	F	P	3	
289171100	N0520005	polybutene-based caulk cmpd.-gun grade	T	T	T	T	T	T	T	T	F	P	3	
289171100	N0520006	polybutene-based caulk cmpd.-gun grade	T	T	T	T	T	T	T	T	F	P	3	
289171100	N0520007	oil-based caulking compound-gun grade	T	T	T	T	T	T	T	T	F	P	3	
289171100	N0520008	oil-based caulking compound-gun grade	T	T	T	T	T	T	T	T	F	P	3	
289171100	N0520009	oil-based caulking compound-gun grade	T	T	T	T	T	T	T	T	F	P	3	
289171100	OA90-26174	CBI69811	T	T	T	T	T	T	T	T	F	P	3	
289171100	OA90-30475	CBI867232	T	T	T	T	T	T	T	T	F	P	3	
289171100	OA90-9773	CBI789363	T	T	T	T	T	T	T	T	F	P	3	
289172100	EJ120001	asphaltic sealant (one part)	T	T	T	T	T	T	T	T	F	P	3	
289172100	EJ120002	asphaltic sealant (one part)	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ070001	butyl rubber sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ070002	butyl rubber sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ070003	butyl rubber sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ070004	butyl rubber sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ080001	acrylic, water-based sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ080002	acrylic, water-based sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ090001	acrylic, solvent-based sealant(one part	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ090002	acrylic, solvent-based sealant(one part	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ100001	polyvinyl acetate-based sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ110001	vinyl acrylic emulsion sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ130001	neoprene sealant (two part-gun-grade)	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ140001	hypalon sealant (one part gun-grade)	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ190001	styrene-butadiene rubber sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	EJ240001	rubber or polmer based rope caulks	T	T	T	T	T	T	T	T	F	P	3	
289173100	IA000306	All Purpose Leak Sealer	T	T	T	T	T	T	T	T	F	P	3	
289173100	IA000317	Permatex Spray-a-Gasket	F	F	F	F	F	F	F	F	F	P	3	
289173100	IA000318	Permatex Gasket Remover	F	F	F	F	F	F	F	F	F	P	3	
289173100	IA000319	Permatex Form-a-Gasket	F	F	F	F	F	F	F	F	F	P	3	
289173100	IA000320	Permatex High Tack	F	F	F	F	F	F	F	F	F	P	3	
289173100	IA000956	VHT Torque Tite (gasket adhesive)	F	F	F	F	F	F	F	F	F	P	3	
289173100	IA001120	Master High Tack (gasket adhesive)	F	F	F	F	F	F	F	F	F	P	3	
289173100	IA001121	ProSeal #2 Gasket Maker	F	F	F	F	F	F	F	F	F	P	3	
289173100	IA001305	Butyl rubber products (caulk)	T	T	T	T	T	T	T	T	F	P	3	
289173100	IA001306	Acrylic aqueous emulsion	T	T	T	T	T	T	T	T	F	P	3	
289173100	IA001307	Acrylic gun-grade pro	T	T	T	T	T	T	T	T	F	P	3	
289173100	IA001308	Polyvinyl products	T	T	T	T	T	T	T	T	F	P	3	
289173100	IA001313	Polybutene caulks	T	T	T	T	T	T	T	T	F	P	3	
289173100	IA001314	Nitrile products (caulk)	T	T	T	T	T	T	T	T	F	P	3	
289173100	N0508001	water-base coat for polyolefin substrat	T	T	T	T	T	T	T	T	F	P	3	
289173100	N0508006	water-based polypropylene film coating	T	T	T	T	T	T	T	T	F	P	3	
289173100	N0524001	hot melt sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	N0524002	hot melt sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	N0524003	hot melt sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	N0524011	polybutene-based asbestos-free sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	N0524013	polybutene-based asbestos-free sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	N0524014	polybutene-based asbestos-free sealant	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289173100	N0524017	polybutene-based insulated glass sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	N0524018	polybutene-based insulated glass sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	N0524023	solvent-based sealant	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-10554	CBI259351	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-10591	CBI994183	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-10690	CBI65771	F	F	F	F	F	F	F	F	T	P	3	
289173100	OA90-14001	CBI469570	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-26176	CBI414380	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-26178	CBI659607	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-26180	CBI209360	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-29335	CBI366421	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-30443	CBI849567	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-30509	CBI552640	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-33130	CBI341011	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-36847	CBI260489	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-36849	CBI612128	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-40885	CBI616739	T	T	T	T	T	T	T	T	F	P	3	
289173100	OA90-9695	CBI449721	T	T	T	T	T	T	T	T	F	P	3	
289173100	RAD04201	Spray Gasket Adhesive	F	F	F	F	F	F	F	F	T	P	3	
289174600	EJ050001	polysulfide sealant-one part gun grade	T	T	T	T	T	T	T	T	T	P	3	
289174600	EJ060001	polysulfide sealant-two part gungrade	T	T	T	T	T	T	T	T	T	P	3	
289174600	EJ060002	polysulfide sealant-two part gungrade	T	T	T	T	T	T	T	T	T	P	3	
289174600	EJ150001	polyurethane sealant (one part)	T	T	T	T	T	T	T	T	T	P	3	
289174600	EJ160001	polyurethane sealant (two part)	T	T	T	T	T	T	T	T	T	P	3	
289174600	EJ230001	expanded polyurethane foam (two part)	T	T	T	T	T	T	T	T	T	P	3	
289174600	IA001312	Silicone products	T	T	T	T	T	T	T	T	F	P	3	
289174600	N0508002	water-based gloss vinyl topcoat	T	T	T	T	T	T	T	T	F	P	3	
289174600	N0508003	water-based gloss vinyl topcoat	T	T	T	T	T	T	T	T	F	P	3	
289174600	N0508004	water-based low gloss vinyl topcoat	T	T	T	T	T	T	T	T	F	P	3	
289174600	N0508005	water-based low gloss vinyl topcoat	T	T	T	T	T	T	T	T	F	P	3	
289174600	OA90-14033	CBI631478	T	T	T	T	T	T	T	T	F	P	3	
289174600	OA90-20939	CBI237299	F	F	F	F	F	F	F	F	T	P	3	
289174600	OA90-20959	CBI735571	F	F	F	F	F	F	F	F	T	P	3	
289174600	OA90-20966	CBI98757	F	F	F	F	F	F	F	F	T	P	3	
289174600	OA90-29115	CBI186186	T	T	T	T	T	T	T	T	F	P	3	
289174600	OA90-29120	CBI736032	T	T	T	T	T	T	T	T	F	P	3	
289174600	OA90-29125	CBI529850	T	T	T	T	T	T	T	T	F	P	3	
289174600	OA90-29128	CBI806490	T	T	T	T	T	T	T	T	F	P	3	
289174600	OA90-29131	CBI479055	T	T	T	T	T	T	T	T	F	P	3	
289174600	OA90-30436	CBI75484	T	T	T	T	T	T	T	T	F	P	3	
289174600	OA90-30493	CBI318586	T	T	T	T	T	T	T	T	F	P	3	
289174600	OA90-317	CBI61907	T	T	T	T	T	T	T	T	F	P	3	
289174600	OA90-650	CBI429992	T	T	T	T	T	T	T	T	F	P	3	
289174600	OA90-652	CBI348490	F	T	F	F	F	F	F	F	F	P	3	
289174600	OA90-6899	CBI478902	T	T	T	T	T	T	T	T	F	P	3	
289174600	OA90-9355	CBI556284	T	T	T	T	T	T	T	T	F	P	3	
289177100	IA001318	Rope caulks	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524004	isobutene-based architect. sealing tape	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524005	isobutene-based architect. sealing tape	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524006	isobutene-based architect. sealing tape	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524007	isobutene-based architect. sealing tape	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524008	isobutene-based construction appl. tape	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524009	isobutene-based construction appl. tape	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524010	isobutene-based construction appl. tape	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524012	polybutene-based asbest-free tape seal	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524015	polybutene-based hi-qual low-\$ tape sea	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524016	polybutene-based high-quality tape seal	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524019	polybutene-based asbest-free tape seal	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524020	polybutene nondry asbest-free tape sea	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524021	polybutene based tape sealant	T	T	T	T	T	T	T	T	F	P	3	
289177100	N0524022	sealant tape for automotive use	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289310000	N0203001	presscake grind (resin)	T	T	T	T	T	T	T	T	T	P	3	
289310000	N0203002	presscake grind (resin/wax)	T	T	T	T	T	T	T	T	T	P	3	
289310500	N0201007	mineral oil based news ink (oils/resin)	T	T	T	T	T	T	T	T	F	P	3	
289310500	N0201151	mineral oil based news ink	T	T	T	T	T	T	T	T	F	P	3	
289310500	N0201161	soya based news ink (oil/resin)	T	T	T	T	T	T	T	T	F	P	3	
289311500	N0201081	letterpress printing ink (acrylate)	T	T	T	T	T	T	T	T	F	P	3	
289311500	N0201082	letterpress printing ink (acrylate)	T	T	T	T	T	T	T	T	F	P	3	
289311500	N0201083	letterpress printing ink (acrylate)	T	T	T	T	T	T	T	T	F	P	3	
289311500	N0201084	letterpress printing ink (acrylate)	T	T	T	T	T	T	T	T	F	P	3	
289320000	N0203003	heat set letdown vehicle w/ Pentalyn 10	T	T	T	T	T	T	T	T	F	P	3	
289320000	N0203004	sole vehicle black Kraft ink (varnish)	T	T	T	T	T	T	T	T	F	P	3	
289320000	N0203005	heatset web offset letdown (gel) vehicl	T	T	T	T	T	T	T	T	F	P	3	
289320000	N0203006	heatset web offset letdown (gel) vehicl	T	T	T	T	T	T	T	T	F	P	3	
289320000	N0203007	HSWO letdown (gel) vehicle (resins)	T	T	T	T	T	T	T	T	F	P	3	
289320000	N0203008	HSWO letdown (gel) vehicle (resins)	T	T	T	T	T	T	T	T	F	P	3	
289320000	N0203009	quickset letdown vehicle w/ Pentalyn 10	T	T	T	T	T	T	T	T	F	P	3	
289320000	N0203010	heat set letdown vehicle w/ Pentalyn 10	T	T	T	T	T	T	T	T	F	P	3	
289323100	N0201065	litho news red (oils/varnish)	T	T	T	T	T	T	T	T	F	P	3	
289323100	N0201085	litho news black (oils/varnish)	T	T	T	T	T	T	T	T	F	P	3	
289323200	N0201089	lithographic heat set ink formulation	T	T	T	T	T	T	T	T	F	P	3	
289323200	N0201090	lithographic heat set ink	T	T	T	T	T	T	T	T	F	P	3	
289323200	N0201094	lithographic sheetfed offset ink	T	T	T	T	T	T	T	T	F	P	3	
289323200	N0201143	web offset heatset ink (varnish/wax)	T	T	T	T	T	T	T	T	F	P	3	
289323200	N0201144	web offset heatset ink (varnish/wax)	T	T	T	T	T	T	T	T	F	P	3	
289323200	N0201145	web offset heatset (oil/resins)	T	T	T	T	T	T	T	T	F	P	3	
289323200	N0201147	quickset (resins/oils)	T	T	T	T	T	T	T	T	F	P	3	
289323200	N0201148	web offset heatset red	T	T	T	T	T	T	T	T	F	P	3	
289323500	N0201086	litho printing ink (acrylate/TMPTA)	T	T	T	T	T	T	T	T	F	P	3	
289323500	N0201087	litho printing ink (acrylate/TMPTA)	T	T	T	T	T	T	T	T	F	P	3	
289323500	N0201088	litho printing ink (acrylate)	T	T	T	T	T	T	T	T	F	P	3	
289323500	N0201097	offset ink	T	T	T	T	T	T	T	T	F	P	3	
289323500	N0201098	offset ink	T	T	T	T	T	T	T	T	F	P	3	
289323500	N0201099	offset ink	T	T	T	T	T	T	T	T	F	P	3	
289323500	N0201100	offset ink	T	T	T	T	T	T	T	T	F	P	3	
289323500	N0201101	offset ink	T	T	T	T	T	T	T	T	F	P	3	
289324400	N0201119	quickset ink (resins/ink oil/wax)	T	T	T	T	T	T	T	T	F	P	3	
289324400	N0201121	quickset/sheetfed ink-yellow--fast set	T	T	T	T	T	T	T	T	F	P	3	
289324400	N0201122	quickset/sheetfed ink-red--fast set	T	T	T	T	T	T	T	T	F	P	3	
289324400	N0201123	quickset/sheetfed ink-blue--fast set	T	T	T	T	T	T	T	T	F	P	3	
289324400	N0201146	sheet fed offset (oils/resin)	T	T	T	T	T	T	T	T	F	P	3	
289324400	N0201149	sheetfed offset ink	T	T	T	T	T	T	T	T	F	P	3	
289324600	N0201091	lithographic sheetfed offset ink	T	T	T	T	T	T	T	T	F	P	3	
289324600	N0201092	lithographic sheetfed offset ink	T	T	T	T	T	T	T	T	F	P	3	
289324600	N0201093	lithographic sheetfed offset ink	T	T	T	T	T	T	T	T	F	P	3	
289324600	N0201120	lithographic quickset ink	T	T	T	T	T	T	T	T	F	P	3	
289330000	N0203011	typical thinner formula: gravure-proces	T	T	T	T	T	T	T	T	F	P	3	
289330000	N0203012	typical thinner formula: gravure-proces	T	T	T	T	T	T	T	T	F	P	3	
289330000	N0203013	typical thinner formula: gravure-proces	T	T	T	T	T	T	T	T	F	P	3	
289330000	N0203014	typical thinner formula: gravure-proces	T	T	T	T	T	T	T	T	F	P	3	
289330000	N0203018	typical thinner formula:SS-nitrocell.in	T	T	T	T	T	T	T	T	F	P	3	
289334100	N0201053	C type gravure ink (nitrocellulose)	T	T	T	T	T	T	T	T	F	P	3	
289334100	N0201103	gravure or flexo package printing ink	T	T	T	T	T	T	T	T	F	P	3	
289334100	N0201104	CAP-504-0.2 pigment dispersion (CAP)	T	T	T	T	T	T	T	T	F	P	3	
289334100	N0201105	gravure or flexo package printing ink	T	T	T	T	T	T	T	T	F	P	3	
289334100	N0201106	CAP-504-0.2 pigment dispersion (CAP)	T	T	T	T	T	T	T	T	F	P	3	
289334100	N0201107	gravure or flexo package printing ink	T	T	T	T	T	T	T	T	F	P	3	
289334100	N0201108	CAP-504-0.2 pigment dispersion (CAP)	T	T	T	T	T	T	T	T	F	P	3	
289334100	N0201109	gravure or flexo package printing ink	T	T	T	T	T	T	T	T	F	P	3	
289334100	N0201110	CAP-504-0.2 pigment dispersion (CAP)	T	T	T	T	T	T	T	T	F	P	3	
289334100	N0201111	gravure or flexo package printing ink	T	T	T	T	T	T	T	T	F	P	3	
289334100	N0201112	CAP-504-0.2 pigment dispersion (CAP)	T	T	T	T	T	T	T	T	F	P	3	



Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289334100	N0201164	phthalo blue ink-gravure (resin)	T	T	T	T	T	T	T	T	F	P	3	
289334400	N0201054	T type gravure ink (rubber)	T	T	T	T	T	T	T	T	F	P	3	
289334400	N0201069	publication gravure ink-red (resinate)	T	T	T	T	T	T	T	T	F	P	3	
289334400	N0201070	publication gravure ink-yellow (resin)	T	T	T	T	T	T	T	T	F	P	3	
289334400	N0201071	publication gravure ink-blue (resinate)	T	T	T	T	T	T	T	T	F	P	3	
289334400	N0201115	publication gravure ink-red (resinate)	T	T	T	T	T	T	T	T	F	P	3	
289334400	N0201116	publication gravure ink-yellow (resinat	T	T	T	T	T	T	T	T	F	P	3	
289334400	N0201117	publication gravure ink-blue (resinate)	T	T	T	T	T	T	T	T	F	P	3	
289334400	N0201118	publication gravure ink (resinate/EHEC)	T	T	T	T	T	T	T	T	F	P	3	
289334900	N0201055	gravure ink (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289334900	N0201057	gravure ink	T	T	T	T	T	T	T	T	F	P	3	
289334900	N0201058	fluorescent gravure ink	T	T	T	T	T	T	T	T	F	P	3	
289334900	N0201059	water gravure ink-l(acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
289334900	N0201067	metallic ink for gravure ink (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289334900	N0201102	A type gravure ink	T	T	T	T	T	T	T	T	F	P	3	
289334900	N0201138	water gravure ink (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
289334900	N0201139	water gravure ink (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
289340000	N0203015	typical thinner formula:flexographic pr	T	T	T	T	T	T	T	T	F	P	3	
289340000	N0203016	typical thinner formula:flexographic pr	T	T	T	T	T	T	T	T	F	P	3	
289340000	N0203017	typical thinner formula:flexographic pr	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201010	flexo ink(acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201011	flexo ink for vinyl substrates(acrylics	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201016	flexographic-nitrocellulose modificatio	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201017	flexographic-nitrocellulose modificatio	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201018	flexographic ink-propionate modificatio	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201019	flexographic ink-propionate modificatio	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201036	flexo ink-non-porous substrates	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201037	flexo ink-non-porous substrates	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201045	ink	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201046	flexographic ink--red	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201047	flexographic ink--white	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201162	aerosol concentrate (resin)	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201167	blue ink (acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201168	red ink (acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201169	black ink (acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201170	phthalo blue ink - dry pigment	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201171	phthalo blue ink - predispersed pigment	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201172	black ink (acrylic) - dry pigment	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201173	black ink (acrylic) - predisp. pigments	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201174	white ink (acrylic) - dry pigment	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201175	white ink (acrylic) - predisp. pigments	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201176	white ink (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201177	white ink (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201178	blue ink (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348200	N0201179	red ink (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201001	corrugated ink-1 (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201002	corrugated ink-2 (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201003	corrugated ink-3 (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201004	corrugated ink(acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201005	corrugated ink(acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201006	corrugated ink(acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201008	film printing ink-white(acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201009	film printing ink-blue(acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201012	flexo ink for polycoated milk carton	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201013	flexo ink for polyethylene bags	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201014	flexo ink for polyethylene bread bags	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201015	flexo ink for polyethylene bread bags	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201020	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201021	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201022	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201023	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289348300	N0201024	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201025	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201026	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201027	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201028	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201029	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201030	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201031	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201032	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201033	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201034	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201035	flexo ink-corrugated board & Kraft pape	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201038	flexo ink-phthalo blue	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201039	flexo ink-carbon black	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201040	flexographic ink-lake red C	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201041	flexographic ink-lithol red	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201042	flexo ink-Cu Ferro Violet	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201043	flexo ink-Cu Ferro Blue	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201044	flexo ink-Diarylide Yellow	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201048	GCMI 31 blue flexographic system	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201049	GCMI 74 red flexographic system	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201050	GCMI 74 red flexographic system	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201051	phthalo blue flexo ink (acrylics)-wax 2	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201052	phthalo blue flexo ink (acrylics)-wax 2	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201056	ink (acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201062	ink (acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201063	water gravure ink (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201064	ink for PE coated milk carton stock	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201072	ink formulation	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201073	ink formulation	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201074	ink formulation-I	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201075	ink formulation-II	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201078	ink-G.S. phthalo blue-alkaline resistan	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201079	ink-Y.S. Watchung red-alkaline resistan	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201080	ink-black-alkaline resistant (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201113	presscake ink	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201114	predispersed colorant ink	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201130	vinyl-modified acrylic flexo/gravure in	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201131	vinyl-modified acrylic flexo/gravure in	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201134	water flexo ink-I (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201135	water flexo ink-II (acrylics)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201136	water flexo ink-III (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201137	water flexo ink-IV (acrylics)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201140	waterborne flexographic ink	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201141	waterborne flexo ink-GCMI No.74 red	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201142	waterborne flexo ink--GCMI No. 90 black	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201150	waterborne ink (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201157	laminating ink for treated polypropylen	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201158	flexo ink for treated polyethylene	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201159	pigmented organic ink (acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201160	pigmented inorganic ink (acrylic/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201165	black ink (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348300	N0201166	cyan blue ink (acrylics/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348500	N0201076	ink-aluminum (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348500	N0201077	ink-bronze (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348700	N0201066	metallic ink for flexo (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348700	N0201068	metallic ink for flexo/gravure (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289348900	N0201060	heat resistant water based ink	T	T	T	T	T	T	T	T	F	P	3	
289348900	N0201061	water based ink on Glascol 86TX/LE5	T	T	T	T	T	T	T	T	F	P	3	
289348900	N0201095	metallic ink	T	T	T	T	T	T	T	T	F	P	3	
289348900	N0201096	metallic pigmented ink	T	T	T	T	T	T	T	T	F	P	3	

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Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289348900	N0201152	aluminum foil ink (urethane/wax)	T	T	T	T	T	T	T	T	F	P	3	
289348900	N0201153	synthetic films & metalized mylar ink	T	T	T	T	T	T	T	T	F	P	3	
289348900	N0201154	vinyl ink	T	T	T	T	T	T	T	T	F	P	3	
289348900	N0201155	flexo ink for unprimed aluminum foil	T	T	T	T	T	T	T	T	F	P	3	
289358500	N0201124	screen printing ink (oligomer/HDODA)	T	T	T	T	T	T	T	T	F	P	3	
289358500	N0201125	screen printing ink (oligomer/EOEOEA)	T	T	T	T	T	T	T	T	F	P	3	
289358500	N0201126	screen printing ink (oligomer/HDODA)	T	T	T	T	T	T	T	T	F	P	3	
289358500	N0201127	screen printing ink (oligomer/EOEOEA)	T	T	T	T	T	T	T	T	F	P	3	
289358500	N0201128	screen printing ink (oligomer/IBMA)	T	T	T	T	T	T	T	T	F	P	3	
289358500	N0201129	screen printing ink (oligomer/IBMA)	T	T	T	T	T	T	T	T	F	P	3	
289358500	N0201132	water-based screen ink (acrylics)	T	T	T	T	T	T	T	T	F	P	3	
289358500	N0201133	water-based screen ink (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289358500	N0201156	water-based screen ink (acrylic)	T	T	T	T	T	T	T	T	F	P	3	
289358500	N0201163	silk screen ink (resins/EHEC)	T	T	T	T	T	T	T	T	F	P	3	
289953400	OA90-13293	CBI154075	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-14123	CBI137116	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-14165	CBI336966	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-15445	CBI409825	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-15447	CBI553587	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-15449	CBI997421	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-15451	CBI213356	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-15453	CBI761159	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-15455	CBI758325	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-1688	CBI719013	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-17133	CBI452522	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-21617	CBI347176	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-21769	CBI238382	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-21771	CBI480433	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-21775	CBI478093	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-22201	CBI394818	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-25424	CBI486353	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-30235	CBI779919	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-30237	CBI488382	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-30241	CBI751338	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-35757	CBI630695	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-36772	CBI313909	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-37571	CBI162902	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-37593	CBI2591	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-37620	CBI519181	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-37622	CBI377001	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-37809	CBI194256	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-37811	CBI582387	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-42261	CBI43247	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-43760	CBI578671	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-43787	CBI297859	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-5732	CBI620564	T	F	F	F	F	F	F	F	F	P	3	
289953400	OA90-6507	CBI110702	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000113	CD-2 Choke/Carb Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000114	Tradco Carb/Choke Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000115	Snap Carb/Choke Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000116	Gumout Carb/Choke Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000117	2+2 Instant Gum Cutter	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000118	STP Carb Spray Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000312	Plasti-kote Protector	T	T	T	T	T	T	T	T	T	P	3	
289954300	IA000313	Berkebile 2+2 Clean Brake	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000314	Permatex Disc Brake Quiet	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000315	CRC Brakleeners	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000316	Brake Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000321	Belt Ease Belt Dressing	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000322	Solder Wire Drier	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000323	PL Spray & Ignition Seal	T	F	F	F	F	F	F	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	IA000325	Snap Starting Fluid	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000392	Carbureto Choke Spray	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000393	Clean Carb	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000394	Carb/Choke & Linkage Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000395	Carb Valve Choke Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000396	#7 Carb/Choke Spray Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000397	Carburetor Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000501	Duro Battery Protector	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000503	Krylon Battery Protector	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000504	Brake Quiet/Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000505	Disc/Drum Brake Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000506	Ignition & Wire Drier	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000546	Carb & Choke Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000547	B9 Chem Dip	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000658	Duro Battery Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000659	Gunk Brake Cleaners	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000660	Tite Grip Belt Dressing	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000661	K Mart Belt Dressing	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000687	B-12 Chemtool Carb Cleaner (aerosol)	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000688	Choke Base Carb Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000689	Motorcycle Carb Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000690	Marvel Choke/Carb Clener	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000691	Siloo Carb/Choke Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000692	B-12 Chemtool Carb Cleaner (liquid)	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000794	Siloo Battery Protect	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000795	Easy Fix Brake Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000799	TMP Belt Dressing	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000838	Pyroil Spray Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000839	Pyroil Carb Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000955	Solder Seal Brake Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000957	Stop Slip Belt Lubricant	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000958	Snap Belt Dressing	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000959	Duro Belt Dressing	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000992	Jet Go Choke/Carb Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000993	Carb & Choke Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000994	Carb Medic/Carb Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000995	#7 Carb & Choke Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000996	K&W Carb/Choke Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA000997	JB Carburetor Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001110	Window Tint\ Smoke	T	T	T	T	T	T	T	T	T	P	3	
289954300	IA001111	No Vue Window Frosting	F	F	F	F	F	F	F	F	F	P	3	
289954300	IA001112	Great Glass	T	T	T	T	T	T	T	T	T	P	3	
289954300	IA001113	Terminal Prot Battery Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001114	Jetco Battery Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001116	Jetco Brake Parts Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001117	Disc Brake Squeal Stop	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001118	Kool It Squeal Silencer	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001119	STP Brake Parts Cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001124	Permatex Belt Dressing	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001125	Jetgo Belt Dressing Lube	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001126	Stop Slip Belt Lubricant	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001127	Kool It 4 Way	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001128	Niehoff Ignition Seal	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001129	Snap Wire Drier	T	F	F	F	F	F	F	F	F	P	3	
289954300	IA001158	Gunk Carb Medic	T	F	F	F	F	F	F	F	F	P	3	
289954300	N0113021	carbon cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	N0113022	carbon cleaner	T	F	F	F	F	F	F	F	F	P	3	
289954300	N0113023	cosmoline remover -hvy oil or greasy wa	T	F	F	F	F	F	F	F	F	P	3	
289954300	N0116007	engine degreaser concentrate	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1001	CBI647653	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-10025	CBI162437	T	F	F	F	F	F	F	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	OA90-1004	CBI439164	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-10056	CBI168855	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-10070	CBI823229	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-10074	CBI546417	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-10080	CBI2901	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-10088	CBI78506	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1035	CBI529903	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-10458	CBI989223	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1055	CBI651308	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1058	CBI154916	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-10598	CBI797501	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-10606	CBI871765	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-10696	CBI404482	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-10722	CBI458286	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-11115	CBI189476	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-11119	CBI42753	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-11121	CBI433258	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-11123	CBI280901	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-11184	CBI399396	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-11209	CBI717987	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-11214	CBI873839	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-11216	CBI707461	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-11232	CBI665058	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-11235	CBI217262	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-11257	CBI221044	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1230	CBI194325	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1242	CBI433415	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1246	CBI480384	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1259	CBI673309	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-12889	CBI41382	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13128	CBI297490	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13135	CBI686714	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13139	CBI550989	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13145	CBI23328	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1317	CBI122977	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1322	CBI996937	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1325	CBI759908	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-133	CBI904372	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1333	CBI678887	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13333	CBI508425	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13338	CBI326698	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13356	CBI685431	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13358	CBI571899	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1340	CBI175043	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13430	CBI890765	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1344	CBI673237	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1354	CBI199546	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-136	CBI128949	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1366	CBI774116	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13822	CBI764662	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13825	CBI736421	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13827	CBI248767	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13829	CBI41333	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13831	CBI178038	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13839	CBI63979	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13843	CBI967436	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13849	CBI441306	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13852	CBI304375	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13855	CBI976431	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-13868	CBI633984	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-139	CBI625470	T	F	F	F	F	F	F	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	OA90-14109	CBI365700	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14125	CBI493899	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14130	CBI308748	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14137	CBI742724	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14142	CBI82176	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14147	CBI219361	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14163	CBI716897	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14167	CBI284452	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14177	CBI701073	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14186	CBI38754	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14192	CBI974360	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14197	CBI117552	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14244	CBI656802	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14251	CBI868348	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14279	CBI770271	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14286	CBI538253	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14293	CBI761088	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14297	CBI331708	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-143	CBI283623	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14302	CBI598678	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14318	CBI177247	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-14322	CBI167791	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-148	CBI279806	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-15045	CBI854656	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-15058	CBI655048	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-15228	CBI714788	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-155	CBI240413	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-15666	CBI576348	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-15670	CBI402294	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-15674	CBI391850	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-15689	CBI179660	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-15741	CBI571515	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-15743	CBI192661	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-15749	CBI402348	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-15770	CBI893521	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-161	CBI387319	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-16360	CBI6303	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-16384	CBI891577	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1648	CBI932166	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1668	CBI961583	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1671	CBI710021	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-16713	CBI398264	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-16716	CBI542194	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-16750	CBI622942	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1678	CBI902299	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-16854	CBI111052	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-16859	CBI659090	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-16862	CBI326718	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-16873	CBI700569	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-16881	CBI791146	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-16897	CBI979486	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-16901	CBI235161	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-170	CBI150492	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-17399	CBI737373	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-17402	CBI23604	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-17610	CBI828482	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-17616	CBI775954	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-17618	CBI123674	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1764	CBI225096	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-1767	CBI52432	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-17952	CBI850425	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	OA90-18037	CBI371878	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18100	CBI337989	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18646	CBI760775	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18649	CBI59478	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18651	CBI689795	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18657	CBI542308	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18664	CBI681768	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18676	CBI679654	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18688	CBI207345	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18692	CBI632925	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18698	CBI957751	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18701	CBI419365	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18706	CBI906349	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18710	CBI658530	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18712	CBI732851	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18723	CBI980672	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18788	CBI638347	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18808	CBI495932	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18812	CBI286787	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18863	CBI926889	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18869	CBI45449	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18872	CBI747990	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18875	CBI725810	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18878	CBI35191	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18880	CBI143586	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18886	CBI804723	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18890	CBI558217	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18893	CBI489181	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18902	CBI451590	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18910	CBI471663	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18918	CBI994077	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18924	CBI757345	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18926	CBI997237	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18930	CBI952952	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18935	CBI739409	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18939	CBI964512	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18943	CBI845646	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18949	CBI421545	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18954	CBI770910	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18959	CBI803578	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18972	CBI839978	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18998	CBI598407	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-18999	CBI162031	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-19019	CBI127722	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-19031	CBI905320	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-19035	CBI464260	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-19041	CBI13410	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-191	CBI507052	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-19447	CBI270510	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-19484	CBI509897	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-19502	CBI207830	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-200	CBI999256	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20019	CBI483245	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20021	CBI673898	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20024	CBI889199	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20027	CBI966802	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20038	CBI304311	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20064	CBI229695	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20069	CBI470629	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20087	CBI88816	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20115	CBI343135	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	OA90-20314	CBI575243	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-205	CBI820855	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20542	CBI531513	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20550	CBI845125	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20889	CBI514421	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-20961	CBI682005	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-211	CBI581835	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-21488	CBI317372	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-21496	CBI983104	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-21574	CBI370573	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-21579	CBI136444	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-21607	CBI26093	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-21614	CBI71969	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-21773	CBI651605	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-21815	CBI581739	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-21824	CBI364279	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22063	CBI289819	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22065	CBI309954	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22142	CBI250196	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22147	CBI982147	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22162	CBI794590	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22166	CBI927499	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22171	CBI963157	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22174	CBI220389	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22178	CBI525347	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22181	CBI587905	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22185	CBI876781	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22195	CBI436427	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22199	CBI656094	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22209	CBI133358	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22212	CBI246370	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22215	CBI409025	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22247	CBI985882	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22253	CBI384222	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22289	CBI268535	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22310	CBI827799	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22314	CBI101302	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22347	CBI934992	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22351	CBI526040	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22354	CBI523568	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22356	CBI33813	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22488	CBI502259	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22491	CBI624515	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22711	CBI18233	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-22715	CBI102136	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-2321	CBI949283	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-23598	CBI390058	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-23614	CBI965272	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-23642	CBI666555	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-23670	CBI474401	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-23691	CBI400020	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-23718	CBI396412	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-23735	CBI266295	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-23738	CBI474060	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-23742	CBI161592	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-23813	CBI446138	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24175	CBI467320	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-242	CBI468797	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24200	CBI51389	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24205	CBI946780	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24211	CBI605268	T	F	F	F	F	F	F	F	F	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	OA90-24251	CBI851831	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24288	CBI848165	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24322	CBI64616	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24431	CBI651234	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24439	CBI687119	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24455	CBI784407	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24458	CBI596437	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24532	CBI242281	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24548	CBI139256	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-24711	CBI782834	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-2494	CBI819610	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-2505	CBI504073	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-25362	CBI853945	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-25365	CBI781382	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-25368	CBI209030	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-25415	CBI688562	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-25418	CBI277973	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-2574	CBI746988	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-25762	CBI527278	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-25772	CBI844465	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-265	CBI692238	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-2660	CBI522039	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-2664	CBI416919	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27606	CBI938948	F	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27631	CBI939581	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27634	CBI511708	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27639	CBI208540	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27642	CBI796467	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27645	CBI202758	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27647	CBI542944	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27672	CBI88772	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27674	CBI556053	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27676	CBI842059	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27688	CBI186949	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27694	CBI764988	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27704	CBI816221	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27706	CBI870866	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27715	CBI349634	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27717	CBI391796	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27719	CBI3150	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27720	CBI941598	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27731	CBI688639	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27753	CBI372504	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27759	CBI830051	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27765	CBI993517	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27766	CBI311942	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27769	CBI101212	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27770	CBI229423	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27778	CBI299475	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27787	CBI23917	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27806	CBI133096	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27810	CBI452841	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27825	CBI716207	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27839	CBI31455	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27845	CBI892829	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27884	CBI681612	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27887	CBI400726	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27909	CBI775683	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27912	CBI559204	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27920	CBI700059	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27940	CBI361522	T	F	F	F	F	F	F	F	F	P	3	

Appendix B  
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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	OA90-27985	CBI95322	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27993	CBI478152	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-27997	CBI468715	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28001	CBI35644	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28002	CBI623006	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28028	CBI530231	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28044	CBI106521	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28049	CBI62768	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28090	CBI514628	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28094	CBI349664	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28130	CBI269011	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28209	CBI847156	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28213	CBI483323	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28284	CBI420833	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28309	CBI269711	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28318	CBI428255	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28322	CBI773556	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28327	CBI419936	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28363	CBI471600	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28366	CBI377587	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28370	CBI124938	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28374	CBI842381	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28383	CBI184038	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28445	CBI950756	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28514	CBI903307	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28523	CBI625166	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28746	CBI950584	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28764	CBI761894	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-28767	CBI780349	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29007	CBI52791	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29134	CBI806256	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29138	CBI222471	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29141	CBI415844	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29149	CBI745817	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29155	CBI152518	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29178	CBI778785	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29195	CBI655324	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-2920	CBI442716	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29242	CBI100490	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29244	CBI910862	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-2937	CBI946193	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-2940	CBI224316	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29535	CBI222274	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29667	CBI975889	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29754	CBI146022	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29763	CBI946595	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29774	CBI132992	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29957	CBI33690	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29960	CBI584724	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29984	CBI559720	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-29988	CBI521570	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-30004	CBI14423	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-30108	CBI721755	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-30125	CBI248436	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-30173	CBI948646	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-30221	CBI771606	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-30239	CBI381845	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-30243	CBI823748	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-30908	CBI333118	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3096	CBI46706	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3100	CBI900802	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	OA90-3102	CBI67785	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3104	CBI692910	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31094	CBI79752	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31097	CBI73869	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31099	CBI610649	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31102	CBI984529	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31107	CBI72843	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31111	CBI461926	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31113	CBI706926	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31115	CBI294096	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31119	CBI659813	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31128	CBI93517	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3113	CBI680005	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31131	CBI847517	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31142	CBI254826	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31145	CBI45965	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31149	CBI70257	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31155	CBI74541	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31163	CBI694499	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31448	CBI656219	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31455	CBI448843	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31458	CBI131447	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31460	CBI423024	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31464	CBI599212	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31469	CBI23352	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31535	CBI411124	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31542	CBI891437	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3174	CBI473156	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31803	CBI437945	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-31808	CBI499551	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3183	CBI42350	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3187	CBI156339	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3190	CBI68607	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3203	CBI851201	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3206	CBI301849	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-326	CBI958327	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-32747	CBI430700	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-32838	CBI789712	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-32869	CBI296674	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-32878	CBI874699	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-32884	CBI677688	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-32952	CBI723751	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-32954	CBI880511	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-32956	CBI7851	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33004	CBI203433	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33195	CBI392803	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33200	CBI879687	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33209	CBI153470	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33305	CBI670778	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33358	CBI420329	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33364	CBI10161	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33370	CBI7345	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33377	CBI835693	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33385	CBI570195	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33387	CBI367213	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33401	CBI162639	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33411	CBI164910	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33431	CBI420488	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33434	CBI665505	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33440	CBI945785	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-33619	CBI555391	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	OA90-33674	CBI15938	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34391	CBI840187	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34401	CBI533765	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34405	CBI367418	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34409	CBI527748	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34413	CBI159178	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34417	CBI695693	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34490	CBI95749	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34494	CBI268677	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34499	CBI952692	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34507	CBI774190	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34604	CBI849044	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34610	CBI530033	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34660	CBI707844	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34708	CBI813900	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34756	CBI384126	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34880	CBI137979	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34885	CBI170585	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-34892	CBI587817	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35268	CBI688114	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35272	CBI660156	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35297	CBI809494	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35318	CBI870840	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35355	CBI278143	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35359	CBI474856	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35365	CBI230999	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35552	CBI679924	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35570	CBI722840	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35711	CBI285996	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35821	CBI908115	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35824	CBI375117	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35830	CBI623260	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35834	CBI565135	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35841	CBI361002	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35882	CBI985378	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-35886	CBI263928	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-365	CBI600247	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36690	CBI379580	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36693	CBI49622	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36770	CBI943374	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36774	CBI548186	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36780	CBI594181	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36784	CBI207772	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36793	CBI225227	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36795	CBI552158	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36797	CBI211767	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36802	CBI803837	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36805	CBI805769	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36813	CBI977115	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36815	CBI378504	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36818	CBI439714	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36823	CBI230388	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-36833	CBI421309	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-369	CBI634897	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37345	CBI121484	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37349	CBI545669	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37353	CBI753320	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37372	CBI275732	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37581	CBI682383	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37584	CBI901138	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37586	CBI245910	T	F	F	F	F	F	F	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	OA90-37590	CBI894148	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37627	CBI968058	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37632	CBI180827	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37638	CBI146283	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37775	CBI286534	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37777	CBI13102.	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37780	CBI892505	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37790	CBI973595	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37793	CBI905646	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37798	CBI558989	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37801	CBI54731	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37805	CBI304259	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37823	CBI345941	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-37890	CBI445270	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3824	CBI241339	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3826	CBI929888	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3834	CBI329183	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3842	CBI145219	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-38454	CBI418169	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3848	CBI92533	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3857	CBI310496	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-38711	CBI322932	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-38714	CBI410834	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-38744	CBI516549	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-3875	CBI430955	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-38768	CBI14364	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-38770	CBI581005	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-38772	CBI875280	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-38774	CBI141975	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-38791	CBI734892	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-407	CBI990949	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-40963	CBI244220	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-40966	CBI505653	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-41667	CBI979958	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-41688	CBI727637	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-41692	CBI95729	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-41816	CBI763845	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-41845	CBI151657	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-41862	CBI282766	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-41946	CBI411608	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42	CBI147147	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42013	CBI273173	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42090	CBI239559	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42097	CBI952776	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42102	CBI174487	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42104	CBI399567	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42107	CBI848729	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42264	CBI529099	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42266	CBI703360	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42268	CBI126440	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42271	CBI635811	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42273	CBI840308	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-4229	CBI12605	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42392	CBI449798	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42397	CBI189428	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42401	CBI241937	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42406	CBI954153	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-4242	CBI197687	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42454	CBI722538	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42457	CBI462678	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-4246	CBI354224	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	OA90-42463	CBI412921	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42479	CBI51285	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42481	CBI957226	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42484	CBI523344	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-4249	CBI787157	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42493	CBI319841	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42501	CBI330125	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42504	CBI915799	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42513	CBI409407	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42837	CBI725242	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42849	CBI966791	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42851	CBI97966	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42865	CBI538232	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-42868	CBI643911	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43089	CBI454802	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43104	CBI976809	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43111	CBI831711	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43116	CBI6329	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43143	CBI14883	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43387	CBI196068	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43392	CBI204665	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43395	CBI716013	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43412	CBI192915	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43434	CBI98064	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43439	CBI605185	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43442	CBI766107	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43465	CBI633822	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43711	CBI749310	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43747	CBI688862	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43752	CBI789517	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43755	CBI163993	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43757	CBI133586	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43762	CBI856816	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43765	CBI743496	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43767	CBI666877	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43769	CBI126238	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43774	CBI914435	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43781	CBI452949	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-43785	CBI179071	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-44097	CBI290985	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-4971	CBI749930	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5056	CBI604444	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5081	CBI937413	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5083	CBI529635	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5087	CBI481397	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5141	CBI375024	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5167	CBI871323	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5178	CBI162634	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5186	CBI351780	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5190	CBI187509	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5199	CBI634134	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5202	CBI513325	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5246	CBI729771	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5290	CBI709453	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5381	CBI118734	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5548	CBI617761	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5552	CBI820902	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5554	CBI199792	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5697	CBI47549	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5701	CBI925751	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5705	CBI646819	T	F	F	F	F	F	F	F	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	OA90-5707	CBI336566	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5710	CBI124423	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5715	CBI402977	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5722	CBI224651	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5728	CBI84156.	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5734	CBI279637	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5737	CBI95985	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5742	CBI257456	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5746	CBI814253	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5768	CBI744225	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5780	CBI855071	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5784	CBI420557	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5790	CBI600648	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5815	CBI279792	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5824	CBI401495	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-5829	CBI153255	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-597	CBI696597	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-605	CBI185460	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6183	CBI823382	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6185	CBI619628	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-619	CBI102386	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6195	CBI788	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6199	CBI609993	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6222	CBI329385	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6227	CBI329077	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6235	CBI45370	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6240	CBI888937	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6244	CBI598940	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6263	CBI273287	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6289	CBI765950	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6291	CBI777469	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6298	CBI598055	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6302	CBI82475	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6305	CBI777840	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6308	CBI680353	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6314	CBI330843	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6316	CBI563746	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6320	CBI609923	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6323	CBI969509	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6326	CBI79907.	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6329	CBI899665	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6332	CBI578823	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6335	CBI276153	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6338	CBI878734	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6341	CBI945218	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6346	CBI410911	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6355	CBI868366	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6357	CBI739911	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6359	CBI585984	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6365	CBI630191	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6368	CBI878170	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6379	CBI108825	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6386	CBI17319	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6389	CBI477256	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6398	CBI462370	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6402	CBI23737	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6409	CBI735187	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6411	CBI414478	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6416	CBI583987	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6419	CBI206032	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6425	CBI963504	T	F	F	F	F	F	F	F	F	P	3	

Appendix B  
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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
289954300	OA90-6523	CBI69354	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6530	CBI714033	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6537	CBI312900	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6548	CBI846634	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6552	CBI922253	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-6557	CBI874684	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-667	CBI509078	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-692	CBI160931	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-722	CBI955002	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-766	CBI152236	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-7876	CBI523383	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-7881	CBI997874	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-7884	CBI288356	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-8302	CBI746216	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-844	CBI105982	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-849	CBI386085	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-8542	CBI457608	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-8550	CBI913310	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-856	CBI255284	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-8916	CBI497832	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-9118	CBI738704	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-9121	CBI382372	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-9149	CBI325248	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-9157	CBI505257	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-988	CBI619219	T	F	F	F	F	F	F	F	F	P	3	
289954300	OA90-9882	CBI148502	T	F	F	F	F	F	F	F	F	P	3	
289954300	RAD03601	Windshield De-Icer Spray	T	F	F	F	F	F	F	F	T	P	3	
289957200	OA90-43056	CBI88418	T	T	F	F	T	F	F	F	F	P	3	
289957200	OA90-43060	CBI303755	T	T	F	F	T	F	F	F	F	P	3	
289957200	OA90-43064	CBI122718	T	T	F	F	T	F	F	F	F	P	3	
289957200	OA90-43067	CBI395100	T	T	F	F	T	F	F	F	F	P	3	
289957300	OA90-17131	CBI139242	T	F	F	F	F	F	T	F	F	P	2	3
289957300	OA90-1831	CBI635441	T	F	F	F	F	F	T	F	F	P	2	3
289957300	OA90-21420	CBI673837	T	F	F	F	F	F	T	F	F	P	2	3
289957300	OA90-27605	CBI30346	T	F	F	F	F	F	T	F	F	P	2	3
289957300	OA90-33152	CBI631269	T	F	F	F	F	F	T	F	F	P	2	3
289957300	OA90-568	CBI674150	T	F	F	F	F	F	T	F	F	P	2	3
289958100	IA000007	Kel Shield Repellent	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000008	Kel Shield Repellent	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000010	Rain & Stain Shield	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000011	Cavalier Protect-All	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000012	Esquire Water Shed	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000013	Drifab Water Repellent	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000379	Kiwi Wet-Pruf	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000380	MC-9 Rain/Stain Protector	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000383	Fabric Water Proofer	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000384	Water and Stain Protector	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000385	Rain and Stain Shield	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000536	Water Shield	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000537	Kiwi Camp Dry	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000538	A-1 Water Repellent	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000539	Red Wing Silicone	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000678	Florsheim Water Repellent	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000679	Derusto Water Repellent	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000681	Kiwi Protect-All	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000827	Totes Coat	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000828	Rain And Stain Shield	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000830	Derusto Water Repellent	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000831	Kiwi Wet Pruf	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000984	Waterlox Water Repellent	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000985	Ever Dri Silicone	T	F	F	F	F	F	F	F	F	P	3	



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289958100	IA000987	Water & Stain Repellent	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000988	Esquire Rain/Stain Guard	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000989	Kiwi Wet Pruf	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA000990	Cadet Heel & Sole Water Repell	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA001150	Rain & Stain Guard	T	F	F	F	F	F	F	F	F	P	3	
289958100	IA001151	Cuprinol	T	F	F	F	F	F	F	F	F	P	3	
289959300	OA90-25547	CBI625486	F	F	F	F	F	F	F	F	F	P	3	
289959300	OA90-32149	CBI233834	T	F	F	F	F	F	F	F	F	P	3	
289959300	OA90-32156	CBI733699	T	F	F	F	F	F	F	F	F	P	3	
289959300	OA90-33836	CBI835110	F	F	F	F	F	F	F	F	F	P	3	
289959700	IA000285	Famowood Wood Plastic (powder)	T	F	F	F	F	F	F	F	F	P	3	
289959700	IA000304	Glass Frosting	T	T	T	T	T	T	T	T	T	P	3	
289959700	IA000308	Plastic Wood Solvent	T	F	F	F	F	F	F	F	F	P	3	
289959700	IA000358	Liquid Paper (correction fluid)	T	T	F	F	T	F	F	F	F	P	3	
289959700	IA000498	Glass Frosting	T	T	T	T	T	T	T	T	T	P	3	
289959700	IA000499	Glass Frosting 33	T	T	T	T	T	T	T	T	T	P	3	
289959700	IA000512	Liquid Paper Thinner	T	T	F	F	T	F	F	F	F	P	3	
289959700	IA000513	Boo Boo Goo (correction fluid)	T	T	F	F	T	F	F	F	F	P	3	
289959700	IA000514	Bond White	T	T	F	F	T	F	F	F	F	P	3	
289959700	IA000655	Liquid Solder	T	T	T	T	T	T	T	T	T	P	3	
289959700	IA000666	Liquid Paper Pen & Ink	T	T	T	T	T	T	T	T	T	P	3	
289959700	IA000667	Carter's Ink Eradicator	T	T	F	F	T	F	F	F	F	P	3	
289959700	IA000796	K&W Spray Copper Coat	T	F	F	F	F	F	F	F	F	P	3	
289959700	IA000797	Taber's Gasket Remover	T	F	F	F	F	F	F	F	F	P	3	
289959700	IA000968	Bond White (correction fluid)	T	T	F	F	T	F	F	F	F	P	3	
289959700	IA000969	Rotex For Ink (correction fluid)	T	T	F	F	T	F	F	F	F	P	3	
289959700	IA000970	Rotex Thinner (correction fluid)	T	T	F	F	T	F	F	F	F	P	3	
289959700	IA001136	Sno Pake (correction fluid)	T	T	F	F	T	F	F	F	F	P	3	
289959700	IA001168	Wite-Out	T	T	F	F	T	F	F	F	F	P	3	
289959700	N0113123	tank cleaners - soak tank	F	F	F	F	F	F	F	F	F	P	3	
289959700	N0113124	tank cleaners - fuel oil (bunker c) tan	F	F	F	F	F	F	F	F	F	P	3	
289959700	OA90-10586	CBI285104	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-14510	CBI391339	F	F	F	F	F	F	F	F	F	P	3	
289959700	OA90-16146	CBI36867	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-16516	CBI386302	F	T	F	F	T	F	F	F	F	P	3	
289959700	OA90-16520	CBI400498	F	T	F	F	T	F	F	F	F	P	3	
289959700	OA90-16534	CBI71065	F	T	F	F	T	F	F	F	F	P	3	
289959700	OA90-18249	CBI394837	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-18642	CBI493156	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-21537	CBI661316	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-24096	CBI379397	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-24733	CBI992480	F	F	F	F	F	F	F	F	F	P	3	
289959700	OA90-2910	CBI537742	F	F	F	F	F	F	F	F	F	P	3	
289959700	OA90-30402	CBI789921	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-30460	CBI841129	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-30478	CBI936598	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-30480	CBI940812	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-30513	CBI54535	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-43076	CBI881395	F	T	F	F	T	F	F	F	F	P	3	
289959700	OA90-43410	CBI247798	F	F	F	F	F	F	F	F	F	P	3	
289959700	OA90-787	CBI847125	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-797	CBI3490	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-827	CBI796100	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-831	CBI422507	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-834	CBI441856	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-9730	CBI865176	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-9834	CBI25543.	T	T	T	T	T	T	T	T	T	P	3	
289959700	OA90-9856	CBI300227	T	T	T	T	T	T	T	T	T	P	3	
2911D5700	OA90-33850	CBI930088	T	T	T	T	T	T	T	T	T	P	3	
2911D5700	OA90-33861	CBI363974	T	T	T	T	T	T	T	T	T	P	3	
2911D5700	OA90-33863	CBI613789	T	T	T	T	T	T	T	T	T	P	3	

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2911D5700	OA90-33865	CBI794358	T	T	T	T	T	T	T	T	F	P	3	
2911D5700	OA90-33871	CBI727093	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000207	Sil-Glyde Lubricant (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000208	Tri-Flow Lubricant (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000209	Liquid Wrench (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000211	Liquid Wrench No. 2 (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000212	Gunk Cycle Chain Lube (aerosol)	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000213	Elmer's Slide-All (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000214	3-In-One Plus Lubricant (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000217	CRC 5-56 (aerosol)	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000269	CRC Heavy Duty Silicone (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000270	CD-2 Silicone Spray (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000271	Gunk Heavy Duty Silicone (aerosol)	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000272	Silicone Spray Lubricant (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000273	Snap Super Heavy Duty Lubric. (aerosol)	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000274	Permatex Lubricant (aerosol)	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000275	Wonder Mist Lubricant (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000303	Lock-Ease	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000328	Door Ease Spray Lube	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000440	Magic Handycan (lubricant)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000442	Let Go (lubricant)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000443	Ten 4 (lubricant)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000446	WD 40 (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000447	Pennz Guard (lubricant)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000448	Liquid Wrench (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000449	Leading Edge (lubricant) (aerosol)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000475	Silicone Lubes	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000477	TMP Silicone Lubricant	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000478	Industrial Silicone Spray	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000479	Industrial Silicone Lube	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000480	Silicone Spray Lubricant	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000614	Solder Seal Super Oil	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000616	K50 Multi Purpose Spray	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000619	Elmers Slide All	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000644	Exsil Spray & Lube	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000745	Snap Lithium Grease	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000746	Kel Prevents Rust	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000749	Syl Glyde (lubricant)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000750	Ronson Multi Purpose Lubricant	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000751	Tri Flowpose Lube	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000758	Liquid Wrench	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000773	Nybco Silicone Lubricant	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000774	Silicone Spray Lubricant	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000775	Derusto Ease It Spray	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000776	Kel Pure Silicone Lubricant	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000777	Dupli Color Lube Spray	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000778	Auto Pak Silicone Lube	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000779	CRC Heavy Duty Silicone	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000800	Door Ease Lubricant	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000907	Tri Flow (lubricant)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000909	Anti Seize (lubricant)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000913	Casite Spray Lube	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000941	Gunk Silicone Spray Lubricant	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000942	Snap Silicone Spray	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000943	Krylon Silicone Spray	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA000944	NYBCO Silicone Lubricant	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA000960	Door Ease Spray Lube	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA001053	Marine Formula 6 66 (lubricant)	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA001055	LM 1 Lube Magic	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA001056	Motorcycle Chain Lube	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA001057	Aluminium Lubricant	T	T	T	T	T	T	T	T	F	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
299202100	IA001059	Elmers Slide All	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA001060	Slide Magic (lubricant)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA001061	J B 80	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA001062	Tri Flow (lubricant)	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA001063	Liquid Wrench No. 2	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA001064	Liquid Wrench Super Oil	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA001065	Marvel Air Tool Oil (lubricant)	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA001086	Snap SPR Hvy Duty Spray (lubricant)	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA001087	Jet Go Silicone Lube	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA001088	Zynolyte Silicone Lube	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA001089	Exsil Spray & Lube	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA001090	Gunk Silicone Spray	T	F	F	F	F	F	F	F	F	P	3	
299202100	IA001091	This Is It Silicone Spray	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA001092	CRC Hvy Duty Silicone	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA001093	Silicone Lube Spray	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA001162	WD 40	T	T	T	T	T	T	T	T	F	P	3	
299202100	IA001163	Singer Sewing Machine Oil	T	T	T	T	T	F	T	F	F	P	3	
299202100	OA90-10015	CBI182147	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-10018	CBI147320	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-10114	CBI926848	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1043	CBI295045	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1048	CBI930318	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-10596	CBI44160	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1083	CBI291044	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1089	CBI236261	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1105	CBI16067	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-11198	CBI307720	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-11253	CBI206271	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-11265	CBI524492	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1139	CBI603274	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-11413	CBI856813	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-11415	CBI500104	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-11421	CBI566090	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-11439	CBI529413	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-11449	CBI990169	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1148	CBI125139	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-11578	CBI852536	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1188	CBI547626	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1192	CBI689788	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-13350	CBI15042	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-13410	CBI521369	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-13417	CBI945476	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1362	CBI432060	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-13737	CBI807685	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-13835	CBI232059	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-13864	CBI575955	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-14119	CBI939072	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-14135	CBI376171	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-14182	CBI386453	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-14238	CBI352654	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-14241	CBI774571	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-14267	CBI982946	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-14299	CBI268188	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-14341	CBI478301	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-14344	CBI250524	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15672	CBI107146	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15677	CBI92356	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15679	CBI597124	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15681	CBI12738	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15683	CBI195963	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15685	CBI910748	T	T	T	T	T	T	T	T	T	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
299202100	OA90-15687	CBI442191	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15696	CBI540454	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15698	CBI476532	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15700	CBI749885	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15703	CBI96539	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15705	CBI739953	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15707	CBI918213	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15709	CBI178582	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15711	CBI844615	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15713	CBI84356	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15718	CBI58843	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15729	CBI403060	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15732	CBI858036	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15734	CBI201080	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15739	CBI419061	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15746	CBI427268	F	F	F	F	F	F	F	F	F	P	3	
299202100	OA90-15759	CBI152089	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15763	CBI806315	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15765	CBI808416	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-15768	CBI973013	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-16509	CBI71743	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1654	CBI578814	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1659	CBI63065	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-16740	CBI427479	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-16743	CBI643243	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1675	CBI241671	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-16753	CBI990118	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-16847	CBI3862.7	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-16867	CBI839809	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-16932	CBI816108	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-16938	CBI610754	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-16963	CBI841163	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1699	CBI667100	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-1701	CBI311493	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-17395	CBI354373	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-17540	CBI387660	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-17644	CBI453062	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-17682	CBI657163	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-17684	CBI800794	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-17980	CBI739047	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-18111	CBI713484	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-18672	CBI979647	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-18961	CBI86655	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-18964	CBI330301	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-18992	CBI633364	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-19026	CBI129350	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-19038	CBI637501	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-19052	CBI621896	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-19055	CBI375385	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-19513	CBI641242	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20011	CBI147193	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20025	CBI960316	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20031	CBI303822	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20076	CBI755145	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20079	CBI127977	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20111	CBI934730	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20119	CBI896987	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20120	CBI27117	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20124	CBI154324	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20156	CBI722630	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20544	CBI257744	T	T	T	T	T	T	T	T	T	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
299202100	OA90-20944	CBI361473	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20946	CBI946231	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-20991	CBI537564	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-21198	CBI731147	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-21491	CBI797789	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-21539	CBI380601	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-21541	CBI859903	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-21543	CBI95853	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-21547	CBI356457	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-21551	CBI285194	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-21555	CBI481431	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-21559	CBI57232.	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-21563	CBI353147	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-21619	CBI661241	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-21801	CBI98628	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-22259	CBI884647	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-2232	CBI463608	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-2234	CBI322649	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-2236	CBI94994	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-23758	CBI280848	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-24169	CBI908918	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-24222	CBI7041	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-24292	CBI229457	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-24330	CBI287477	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-24500	CBI824494	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-24509	CBI176510	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-2535	CBI391341	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-25478	CBI798933	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-25758	CBI690028	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-25766	CBI602539	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-25786	CBI388081	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-25790	CBI219937	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-25794	CBI434539	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-26223	CBI42671.	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-26240	CBI955938	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-27558	CBI31523	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-27563	CBI345978	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-27592	CBI806008	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-27726	CBI470268	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-27792	CBI345991	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-27794	CBI193323	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-27799	CBI54596	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-27827	CBI904986	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-27860	CBI533939	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-2787	CBI946924	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28415	CBI716407	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28433	CBI607762	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28449	CBI337485	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28451	CBI241569	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28455	CBI906951	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28473	CBI872444	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28501	CBI425899	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28510	CBI62374	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28517	CBI537911	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28519	CBI479695	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28521	CBI837213	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28530	CBI285999	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28533	CBI450591	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28536	CBI149622	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28541	CBI188336	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28543	CBI907404	T	T	T	T	T	T	T	T	T	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
299202100	OA90-28593	CBI589255	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28604	CBI740668	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28605	CBI626870	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28608	CBI279265	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-28721	CBI459186	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-29145	CBI709907	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-29169	CBI156508	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-29171	CBI609008	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-293	CBI940230	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-296	CBI213792	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-2966	CBI75192	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-29928	CBI379322	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-30024	CBI813124	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-30034	CBI736539	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-30077	CBI545174	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-30100	CBI602486	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-30112	CBI479086	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-30129	CBI610962	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-30131	CBI801178	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-30165	CBI643628	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-30191	CBI71056	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-30209	CBI605431	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-30286	CBI628567	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-30289	CBI763402	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-31091	CBI794460	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-31134	CBI846554	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-31136	CBI784264	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-31438	CBI785351	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-31442	CBI869892	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-31462	CBI596452	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-31521	CBI598139	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-31525	CBI983558	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-31528	CBI733730	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-3195	CBI890500	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-3208	CBI96460	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-33203	CBI397553	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-33319	CBI187220	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-33380	CBI589243	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-33391	CBI885448	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-33398	CBI122183	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-33407	CBI591220	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-33442	CBI11314.	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-33445	CBI450656	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-33638	CBI969656	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-33716	CBI682278	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34051	CBI680410	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34397	CBI453126	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34501	CBI600734	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34504	CBI500963	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34694	CBI730799	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34777	CBI494204	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34793	CBI404907	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34797	CBI690996	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34806	CBI176122	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34813	CBI24040	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34819	CBI61678	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34823	CBI606590	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34826	CBI16562.	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34831	CBI137997	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-34833	CBI883640	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35155	CBI820603	T	T	T	T	T	T	T	T	T	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
299202100	OA90-35157	CBI547381	F	F	F	F	F	F	F	F	F	P	3	
299202100	OA90-35282	CBI516516	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35303	CBI171777	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35308	CBI971140	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35312	CBI897781	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35331	CBI745466	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35336	CBI249907	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35341	CBI151968	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35345	CBI971035	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35350	CBI998879	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35372	CBI212280	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35375	CBI770905	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35381	CBI687524	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35706	CBI792622	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35714	CBI520080	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35737	CBI839408	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35761	CBI449696	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35764	CBI917374	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35801	CBI441995	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-35973	CBI419839	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-36826	CBI162403	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-37607	CBI40750	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-37624	CBI115021	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-3856	CBI922388	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-3865	CBI305729	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-39207	CBI682143	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-39461	CBI569347	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-39463	CBI870499	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-3948	CBI420272	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-3951	CBI11907	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-39540	CBI676567	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-3988	CBI266768	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-4047	CBI177452	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-41509	CBI318880	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-41893	CBI559492	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-4234	CBI187405	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-42468	CBI968696	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-42497	CBI741597	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-42499	CBI922136	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-42507	CBI979151	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-43131	CBI553624	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-43147	CBI26703	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-43181	CBI44813	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-43186	CBI992078	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-4332	CBI825541	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-43382	CBI909559	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-43460	CBI298755	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-43475	CBI943603	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-501	CBI562438	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-5022	CBI814072	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-5100	CBI14356	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-5183	CBI383205	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-5232	CBI113340	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-5304	CBI58666	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-5308	CBI27257	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-5315	CBI25828	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-5688	CBI20575	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-5719	CBI460393	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-6231	CBI690866	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-6282	CBI877402	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-6293	CBI96933	T	T	T	T	T	T	T	T	T	P	3	

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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
299202100	OA90-6511	CBI984387	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-6514	CBI364994	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-6693	CBI206251	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-6698	CBI266475	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-7329	CBI35293	T	T	T	T	T	T	T	T	F	P	3	
299202100	OA90-7820	CBI593205	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-7824	CBI124896	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-7897	CBI193859	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-8139	CBI665885	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-8152	CBI630135	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-816	CBI396375	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-8230	CBI977618	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-8425	CBI912232	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-9127	CBI956356	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-916	CBI495421	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-9182	CBI605244	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-968	CBI234847	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-977	CBI325300	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-982	CBI34204	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-993	CBI609886	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-9946	CBI61762	T	T	T	T	T	T	T	T	T	P	3	
299202100	OA90-9951	CBI497157	T	T	T	T	T	T	T	T	T	P	3	
299202100	RAD04101	Tablet Machine lubricant	T	F	T	T	F	F	F	F	F	P	3	
299202100	RAD04102	Tablet Machine lubricant	T	F	T	T	F	F	F	F	F	P	3	
299203100	IA000216	2+2 White Lithium Grease (aerosol)	T	F	F	F	F	F	F	F	F	P	3	
299203100	IA000444	CD-2 White Lithium Grease (aerosol)	T	F	F	F	F	F	F	F	F	P	3	
299203100	IA000445	White Lithium Grease (aerosol)	T	F	F	F	F	F	F	F	F	P	3	
299203100	IA000748	Lith Ease Grease	T	F	F	F	F	F	F	F	F	P	3	
299203100	IA000910	Gunk White Lithium Grease	T	F	F	F	F	F	F	F	F	P	3	
299203100	IA001051	Snap White Lithium Grease	T	F	F	F	F	F	F	F	F	P	3	
299203100	OA90-1112	CBI333914	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-1167	CBI781615	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-1280	CBI934508	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-14133	CBI505585	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-14180	CBI909019	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-14315	CBI563828	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-15720	CBI679088	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-15726	CBI265063	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-16989	CBI621943	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-1713	CBI747951	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-17643	CBI718210	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-17649	CBI826339	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-17654	CBI854220	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-18680	CBI613273	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-18799	CBI388749	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-27555	CBI284546	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-27803	CBI911110	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-27963	CBI710382	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-27990	CBI802910	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-28442	CBI703774	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-28526	CBI489404	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-28528	CBI822408	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-28598	CBI268749	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-29180	CBI319571	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-2962	CBI310325	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-31569	CBI85290	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-33414	CBI64246	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-33448	CBI364837	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-35322	CBI924520	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-36838	CBI308909	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-43430	CBI881934	T	T	T	T	T	T	T	T	T	P	3	



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PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
299203100	OA90-43479	CBI718983	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-5208	CBI521542	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-5336	CBI835092	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-6268	CBI593160	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-8046	CBI13458.	T	T	T	T	T	T	T	T	T	P	3	
299203100	OA90-9207	CBI244777	T	T	T	T	T	T	T	T	T	P	3	
299909800	OA90-24014	CBI630656	F	F	F	F	F	F	F	F	F	P	3	
299909800	OA90-24022	CBI637633	F	F	F	F	F	F	F	F	F	P	3	
299909800	OA90-33277	CBI598139	F	F	F	F	F	F	F	F	F	P	3	
299909800	OA90-33838	CBI220528	F	F	F	F	F	F	F	F	F	P	3	
299909800	OA90-33840	CBI127741	F	F	F	F	F	F	F	F	F	P	3	
299909800	OA90-37630	CBI562505	F	F	F	F	F	F	F	F	F	P	3	
3011D3900	IA000324	Puncture Seal	T	F	F	F	F	F	F	F	F	P	3	
3011D3900	OA90-10608	CBI711459	T	F	F	F	F	F	F	F	F	P	3	
3011D3900	OA90-18714	CBI49947	T	F	F	F	F	F	F	F	F	P	3	
3011D3900	OA90-21611	CBI477819	T	F	F	F	F	F	F	F	F	P	3	
3011D3900	OA90-24172	CBI399244	T	F	F	F	F	F	F	F	F	P	3	
3011D3900	OA90-31152	CBI104902	T	F	F	F	F	F	F	F	F	P	3	
3011D3900	OA90-37618	CBI757773	T	F	F	F	F	F	F	F	F	P	3	
3011D3900	OA90-37827	CBI625215	T	F	F	F	F	F	F	F	F	P	3	
3011D3900	OA90-5713	CBI367295	T	F	F	F	F	F	F	F	F	P	3	
3011D3900	OA90-6394	CBI876071	T	F	F	F	F	F	F	F	F	P	3	
3011D3900	OA90-6544	CBI405977	T	F	F	F	F	F	F	F	F	P	3	
306942600	RAD93030	Black rubber molding	T	T	T	T	T	T	T	T	T	F	M	4
306942600	WADGA090	Radial II rubber floor tile	T	T	T	T	T	T	T	T	T	F	M	4
306942600	WADGA096	711 rubber wall base	T	T	T	T	T	T	T	T	T	F	M	4
308631000	IA001317	Polyurethane foam	T	T	T	T	T	T	T	T	T	F	M	4
308631000	RAD93007	Polystyrene rigid foam insulation	T	T	T	T	T	T	T	T	T	F	M	4
329611100	WADGA029	Monokote fireproofing	T	T	T	T	T	T	T	T	T	F	M	4
329613000	RAD93001	Glass Wool Insulation	T	T	T	T	T	T	T	T	T	F	M	4
329613000	RAD93002	Glass Wool-Batts, Blankets, Rolls	T	T	T	T	T	T	T	T	T	F	M	4
329613000	RAD93003	Glass Wool-Batts, Blankets, Rolls	T	T	T	T	T	T	T	T	T	F	M	4
329613000	RAD93004	Glass Wool-Batts, Blankets, Rolls	T	T	T	T	T	T	T	T	T	F	M	4
329613000	RAD93005	Glass Wool-Batts, Blankets, Rolls	T	T	T	T	T	T	T	T	T	F	M	4
329616100	RAD93006	Ceiling Panel	T	T	T	T	T	T	T	T	T	F	M	4
329616100	WADGA030	Hytone acoustical panel (ceiling tile)	T	T	T	T	T	T	T	T	T	F	M	4
329616100	WADGA031	ceiling tile	T	T	T	T	T	T	T	T	T	F	M	4
329616100	WADGA043	Permacote linacoustic duct liner	T	T	T	T	T	T	T	T	T	F	M	4
329616100	WADGA070	Flexible lined sheetmetal ductwork	T	T	T	T	T	T	T	T	T	F	M	4
329616100	WADGA079	Ceiling tile	T	T	T	T	T	T	T	T	T	F	M	4
329616100	WADGA092	Ceiling tile (mineral fiber)	T	T	T	T	T	T	T	T	T	F	M	4
395120000	OA90-10743	CBI567406	T	T	F	F	T	F	F	F	F	P	3	
395120000	OA90-43081	CBI774443	T	T	F	F	T	F	F	F	F	P	3	
395120000	OA90-43497	CBI883090	T	T	F	F	T	F	F	F	F	P	3	
395120000	OA90-549	CBI207689	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-13068	CBI979618	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-13073	CBI734164	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-13077	CBI18565	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-13082	CBI665604	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-13087	CBI532689	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-13093	CBI549779	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-13098	CBI484838	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-13105	CBI426800	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-13110	CBI625491	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-13115	CBI271741	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-13119	CBI356729	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-13982	CBI99889	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-16694	CBI422919	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-16701	CBI519564	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-18726	CBI144091	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-18739	CBI726742	T	T	F	F	T	F	F	F	F	P	3	

Appendix B  
Product-Formulation File

PRODUCT_ID	FORMULATN	DESC	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	ENV7	ENV8	ENV9	MAT_PROD	CASE	SUBCASE
395241900	OA90-18743	CBI595870	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-18749	CBI132796	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-30485	CBI828595	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-33418	CBI351299	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-34939	CBI802759	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-35954	CBI530022	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-36077	CBI908071	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-37659	CBI535888	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-37661	CBI27858.	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-41286	CBI215621	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-41289	CBI709170	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-41296	CBI429422	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-41304	CBI793327	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-41307	CBI535708	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-41313	CBI322918	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-42307	CBI705846	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-4592	CBI450681	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-8233	CBI740372	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-8250	CBI39983.	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-8254	CBI217028	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-9662	CBI119670	T	T	F	F	T	F	F	F	F	P	3	
395241900	OA90-9674	CBI963280	T	T	F	F	T	F	F	F	F	P	3	
399601100	RAD93009	Sheet vinyl flooring	T	T	T	T	T	T	T	T	F	M	4	
399601100	RAD93011	Vinyl flooring	T	T	T	T	T	T	T	T	F	M	4	
399601100	WADGA080	Vinyl flooring	T	T	T	T	T	T	T	T	F	M	4	
399601100	WADGA081	Vinyl flooring	T	T	T	T	T	T	T	T	F	M	4	
399602100	RAD93010	Vinyl tile	T	T	T	T	T	T	T	T	F	M	4	
399602100	WADGA060	Vinyl flooring (pattern 51858) (tile)	T	T	T	T	T	T	T	T	F	M	4	
399602600	WADGA062	Vinyl composition tile (V-824-3)	T	T	T	T	T	T	T	T	F	M	4	

**Appendix C**  
**Chemical File**

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Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
1002897	ammonium stearate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
100378	2-(DIETHYLAMINO)-ETHANOL	117.00	ALD	1.400E+00	US EPA (1989)	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
100403	4-VINYLCYCLOHEXENE	108.00		1.570E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
100414	ETHYLBENZENE	106.00	SRC	9.600E+00	DAUBERT,TE &	0	0.10000	0.10000	0.10000	1.38E-01	2.68E-02	4.52E-02	9.98E-01	9.61E-01	5.95E-02	T
100425	STYRENE	104.00	SRC	6.400E+00	CHAO,J ET AL	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
100470	BENZONITRILE	103.00	SRC	7.680E-01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
100516	BENZYL ALCOHOL	108.00	SRC	6.260E-02	GRAYSON,BT &	0	100.00000	100.00000	100.00000	1.11E-04	7.42E-06	1.85E-05	4.93E-04	2.46E-04	3.26E-05	T
100527	BENZALDEHYDE	106.00	EFDB	1.270E-01	AMBROSE,D ET	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
10061026	1,3-DICHLOROPROPENE (TRANS)	111.00	ALD	2.670E+01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
100867	dimethylbenzylcarbinol					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1009616	P-ACETYLACETOPHENONE	162.00	SRC	7.230E-03	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
100970	HEXAMETHYLENETETRAMINE	140.00	ALD	4.000E-03	STRANSKI,IN	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
10101390	calcium metasilicate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
10124568	sodium hexametaphosphate	612.00	Chemfinder			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
10124682	n-octylacrylamide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
101688	DIPHENYL METHANE DIISOCYANATE	250.00	HCDR	1.170E-05	DABERT,TE &	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
101837	dicyclohexylamine	181.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
101848	DIPHENYL ETHER	170.00	SRC	2.250E-02	AMBROSE,D ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
101860	hexyl cinnamic aldehyde					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
102067	N,N'-DIPHENYLGUANIDINE	211.00	SRC	8.450E-06	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
10213771	tripropylene glycol methyl ether	206.00	ALD			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
10213793	sodium metasilicate pentahydrate	212.00	Chemfinder			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
10222012	2,2-DIBROMO-2-CYANOACETAMIDE	242.00	HCDR	1.520E-05	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
102716	TRITHANOLAMINE	149.00	SRC	3.590E-06	HOWARD, P.H.	0	0.10000	0.10000	0.10000	2.42E-05	1.62E-06	4.04E-06	1.07E-04	5.36E-05	7.11E-06	T
10294345	BORON TRICHLORIDE	117.00		1.000E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
103117	2-ETHYLHEXYL ACRYLATE	184.00		1.780E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
103231	DI-2-ETHYLHEXYL ADIPATE	371.00	SRC	8.500E-07	FELDER,JD ET	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
103275	phenylmercuric propionate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
10332339	sodium perborate monohydrate	100.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
103366	CINNAMIC ACID, ETHYL ESTER	176.00		1.250E-02	OHE,S (1976)	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
103504	DIBENZYL ETHER	198.00	SRC	1.030E-03	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
103651	N-PROPYLBENZENE	120.00	SRC	3.420E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
103833	N,N-DIMETHYLBENZYLAMINE	135.00	SRC	5.870E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
104154	P-TOLUENESULFONIC ACID	172.00	SRC	2.700E-06	MPBPVP	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
104518	N-BUTYLBENZENE	134.00	SRC	1.064E+00	CHAO,J ET AL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
104609	PMO-10					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
104687	diethylene glycol phenyl ether	182.00	HCDR	1.000E-02	HCDR	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
104767	2-ETHYL-1-HEXANOL	130.00	EFDB	1.360E-01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
104938	P-METHYLANISOLE	122.00	SRC	1.140E+00	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
105055	P-DIETHYLBENZENE	134.00		1.060E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
105306	2-METHYL-1-PENTANOL	102.00		1.920E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
105373	ETHYL PROPIONATE	102.00	SRC	3.585E+01	PERRY,RH & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
105464	S-BUTYLACETATE	116.00		1.700E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
105602	CAPROLACTAM	113.00	EFDB	1.600E-03	RITZ,J & FUC	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
10574375	2,3-DIMETHYL-2-PENTENE	98.00		5.022E+01	DYKYJ,J & RE	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
106149	12-hydroxy-octadecanoic acid					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
106229	3,7-DIMETHYL-6-OCTEN-1-OL	156.00	SRC	4.406E-02	PERRY,RH & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
106230	CITRONELLAL	154.00		2.800E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
106241	GERANIOL	154.00	SRC	3.001E-02	PERRY,RH & G	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
106252	nerol					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
106423	P-XYLENE	106.00	EFDB	8.840E+00	CHAO,J ET AL	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
106434	P-CHLOROTOLUENE	127.00	EFDB	2.690E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	1.20E-01	2.13E-02	3.76E-02	9.77E-01	8.51E-01	5.07E-02	T
106445	P-CRESOL	108.00	EFDB	1.100E-01	CHAO,J ET AL	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
106467	1,4-DICHLOROBENZENE	147.00	EFDB	1.000E+00	WALSH,PN & S	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
106650	DIMETHYL SUCCINATE	146.00	EFDB	2.500E-01	MERCK INDEX	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
106672	4-METHYL-2-ETHYL-1-PENTANOL	130.00		7.555E-03	DYKYJ,J ET A	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1067330	dibutyltin diacetate	351.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
106887	1,2-BUTYLENEOXIDE	72.00	SRC	1.800E+02	OSBORN,AG &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
106978	N-BUTANE	58.00	SRC	1.823E+03	RIDDICK,JA E	0	0.00100	0.00100	0.00100	1.92E-01	4.31E-02	6.82E-02	1.00E+00	1.00E+00	8.66E-02	T
106990	1,3-BUTADIENE	54.00	SRC	2.107E+03	DAUBERT,TE &	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107028	ACROLEIN	56.00		2.740E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107028	acrolein	56.00	EFDB	2.740E+02	EFDB	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107039	1-PROPANETHIOL	76.00		1.542E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107062	1,2-DICHLOROETHANE	99.00	SRC	7.890E+01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107131	ACRYLONITRILE	53.00		1.085E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107153	1,2-DIAMINOETHANE	60.00	ALD	1.200E+01	BOUBLIK,T ET	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1071814	2,2,5,5-TETRAMETHYLHEXANE	142.00		8.743E+00	ZWOLINSKI,BJ	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1071836	GLYPHOSPHATE	169.00	ALD	2.890E-10	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107211	ETHYLENE GLYCOL	62.00	SRC	9.200E-02	DAUBERT,TE &	0	0.00100	0.00100	0.00100	2.25E-05	1.50E-06	3.76E-06	9.98E-05	4.99E-05	6.61E-06	T
107222	GLYOXAL	58.00	SRC	2.550E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107255	METHYLVINYLETHANER	58.00		1.316E+03	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107415	2-METHYL-2,4-PENTANEDIOL	118.00	SRC	1.300E-02	DAUBERT,TE &	0	100.00000	100.00000	100.00000	1.09E-04	7.26E-06	1.81E-05	4.82E-04	2.41E-04	3.19E-05	T
107437	betaine (tego betaine I 7)	117.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107437	BETAINE	117.00		5.340E-07	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107642	Arosurf TA-100					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107642	distearyldimonium chloride					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107835	2-METHYLPENTANE	86.00	SRC	2.110E+02	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107879	2-PENTANONE	86.00	ALD	3.540E+01	RIDDICK,JA E	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107880	1,3-BUTANEDIOL	90.00	SRC	2.010E-02	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107926	BUTYRIC ACID	88.00	SRC	1.000E-03	RIDDICK,JA E	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107960	3-MERCAPTOPROPIONIC ACID	106.00		4.984E-02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
107982	Dowanol PM	90.00	HSDB	1.180E+01	HSDB	0	0.00100	0.00100	0.00100	5.64E-06	3.76E-07	9.41E-07	2.50E-05	1.25E-05	1.66E-06	T
107982	1-METHOXY-2-PROPANOL	90.00	SRC	1.250E+01	DOW CHEMICAL	0	0.00100	0.00100	0.00100	5.64E-06	3.76E-07	9.41E-07	2.50E-05	1.25E-05	1.66E-06	T
108010	2-DIMETHYLAMINOETHANOL	89.00	SRC	4.200E-01	HANN,RWJR &	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108032	1-NITROPROPANE	89.00	EFDB	1.010E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108054	VINYL ACETATE	86.00	SRC	9.016E+01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108087	2,4-DIMETHYLPENTANE	100.00	SRC	7.940E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108101	4-METHYL-2-PENTANONE	100.00	SRC	1.986E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	3.21E-02	2.51E-03	6.02E-03	1.64E-01	8.55E-02	1.02E-02	T
108112	4-METHYL-2-PENTANOL	102.00	EFDB	5.300E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108214	ISOPROPYL ACETATE	102.00	SRC	5.920E+01	AMBROSE,D ET	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108327	PROPYLENE CARBONATE	102.00	SRC	2.230E-03	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108383	M-XYLENE	106.00	EFDB	8.290E+00	CHAO,J ET AL	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108394	M-CRESOL	108.00	EFDB	1.380E-01	CHAO,J ET AL	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108418	M-CHLOROTOLUENE	127.00	EFDB	3.675E+00	PERRY,RH & G	0	0.00099	0.00099	0.00099	1.20E-01	2.13E-02	3.76E-02	9.77E-01	8.51E-01	5.07E-02	T
108419325	oxo-octyl acetate (cas no. 10841					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108463	RESORCINOL	110.00	SRC	4.890E-04	YAWS,CL (199	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108656	PROPYLENE GLYCOL ME ETHER ACETATE	132.00		3.921E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108678	1,3,5-trimethylbenzene	120.00	EFDB	2.480E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108703	1,3,5-TRICHLOROBENZENE	181.00	SRC	5.280E-01	PERRY,RH & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108781	MELAMINE	126.00	SRC	3.590E-10	HIRT,RC ET A	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108838	2,6-DIMETHYL-4-HEPTANONE	142.00	EFDB	1.650E+00	RIDDICK,JA E	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108872	1-METHYLCYCLOHEXANE	98.00	SRC	4.600E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	1.51E-01	3.32E-02	5.28E-02	1.00E+00	1.00E+00	6.73E-02	T

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
108883	TOLUENE	92.00	SRC	2.840E+01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	1.44E-01	2.70E-02	4.65E-02	9.96E-01	9.41E-01	6.18E-02	T
108907	CHLOROBENZENE	113.00	EFDB	1.197E+01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108930	cyclohexanol	100.00	EFDB	8.000E-01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	2.87E-02	2.21E-03	5.32E-03	1.44E-01	7.49E-02	9.01E-03	T
108941	CYCLOHEXANONE	98.00	EFDB	4.330E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
108952	PHENOL	94.00	SRC	3.500E-01	JONES,AH (19	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
109171	TETRAETHYLENEGLYCOL DIMETHACRYLATE	330.00		1.200E-04	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
109217	N-BUTYLBUTYRATE	144.00		1.810E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
109433	DIBUTYL SEBACATE	314.00	SRC	4.690E-06	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
109557	dimethylamino propylamine	102.00	ALD	1.000E+01	HCDR	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
109591	ISOPROPOXYETHANOL	104.00	HCDR	1.620E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
109604	N-PROPYL ACETATE	102.00	SRC	3.370E+01	AMBROSE,D ET	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
109660	N-PENTANE	72.00	SRC	5.140E+02	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
109864	2-METHOXYETHANOL	76.00	SRC	9.500E+00	DOW CHEMICAL	0	0.10000	0.10000	0.10000	1.68E-01	3.65E-02	5.85E-02	1.00E+00	9.99E-01	7.50E-02	T
109875	DIMETHOXYMETHANE	76.00	ALD	3.975E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
109922	ETHYL VINYL ETHER	72.00		5.110E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
109999	TETRAHYDROFURAN	72.00	SRC	1.622E+02	DAUBERT,TE &	0	0.10000	0.10000	0.10000	2.15E-02	1.57E-03	3.84E-03	1.03E-01	5.27E-02	6.60E-03	T
110009	FURAN	68.00		6.000E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110123	5-METHYL-2-HEXANONE	114.00	ALD	5.200E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110190	SEC-BUTYLACETATE	116.00	ALD	1.783E+01	YAWS,CL (199	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110270	ISOPROPYL MYRISTATE	270.00	SRC	2.000E-01	BONOHORST,CW	0	100.00000	100.00000	100.00000	8.89E-02	1.70E-02	2.88E-02	9.85E-01	8.78E-01	3.79E-02	T
1103384	barium lithol mid					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110418	2-methylundecane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110430	2-HEPTANONE	114.00	SRC	3.855E+00	AMBROSE,D ET	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110441	SORBIC ACID	112.00	SRC	1.340E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	1.40E-05	9.32E-07	2.33E-06	6.19E-05	3.09E-05	4.10E-06	T
110496	2-METHOXYETHYL ACETATE	118.00		4.014E+00	OHE,S (1976)	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110543	N-HEXANE	86.00	SRC	1.513E+02	BOUBLIK,T ET	0	0.10000	0.10000	0.10000	1.61E-01	3.56E-02	5.64E-02	1.00E+00	1.00E+00	7.18E-02	T
110623	1-PENTANAL	86.00	SRC	2.600E+01	FLICK,EW (19	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110634	1,4-BUTANEDIOL	90.00	SRC	1.050E-02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110690	Exkin #1					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110805	2-ETHOXYETHANOL	90.00	SRC	5.310E+00	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110827	CYCLOHEXANE	84.00	EFDB	9.686E+01	CHAO,J ET AL	0	0.10000	0.10000	0.10000	1.62E-01	3.56E-02	5.66E-02	1.00E+00	1.00E+00	7.22E-02	T
110918	MORPHOLINE	87.00	SRC	1.008E+01	RIDDICK,JA E	0	100.00000	100.00000	100.00000	3.61E-05	2.41E-06	6.03E-06	1.60E-04	8.00E-05	1.06E-05	T
110930	6-methylhept-5-enone					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110974	DIISOPROPANOLAMINE	133.00	SRC	1.247E-04	YAWS,CL (199	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
110985	dipropylene glycol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
11099073	glyceryl stearate	359.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
111013	Squalane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
11105105	TRITON QS-15					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111137	2-OCTANONE	128.00	SRC	1.350E+00	RIDDICK,JA E	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111159	ETHOXYETHYLACETATE	132.00		2.340E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
11118573	chrome oxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111273	1-HEXANOL	102.00	EFDB	9.280E-01	DAUBERT,TE &	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
11129149	cadmium zinc sulfide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111308	PENTANE-1,5-DIAL	100.00	ALD	6.000E-01	HEISLER,SL &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
11138662	xantham gum					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111400	DIETHYLENETRIAMINE	103.00	EFDB	2.317E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	2.91E-12	1.94E-13	4.86E-13	1.29E-11	6.45E-12	8.55E-13	T
111422	DIETHANOLAMINE	105.00	EFDB	2.800E-04	DOW CHEMICAL	0	0.10000	0.10000	0.10000	1.13E-08	7.51E-10	1.88E-09	4.99E-08	2.49E-08	3.30E-09	T
111466	DIETHYLENE GLYCOL	106.00	SRC	7.800E-03	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111557	ETHYLENE GLYCOL DIACETATE	146.00	SRC	7.740E-02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111604	ethylene glycol monostearate	329.00	HCDR			0	0.00100	0.00100	0.00100	1.74E-03	1.18E-04	2.93E-04	7.82E-03	3.92E-03	5.14E-04	T
111659	OCTANE	114.00	SRC	1.405E+01	YAWS,CL (199	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
111660	1-OCTENE	112.00	SRC	1.742E+01	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111671	2-OCTENE	112.00		1.634E+01	ZWOLINSKI,BJ	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111706	1-HEPTANOL	116.00		2.162E-01	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111717	HEPTANAL	114.00	SRC	3.520E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111762	ETHYLENE GLYCOL N-BUTYL ETHER	118.00	SRC	8.800E-01	DOW CHEMICAL	0	100.00000	100.00000	100.00000	5.45E-06	3.63E-07	9.08E-07	2.41E-05	1.21E-05	1.60E-06	T
111773	DIETHYLENE GLYCOL MONOMETHYL ETHER	120.00	SRC	2.500E-01	DOW CHEMICAL	0	0.10000	0.10000	0.10000	4.59E-09	3.06E-10	7.65E-10	2.03E-08	1.02E-08	1.35E-09	T
111842	N-NONANE	128.00	SRC	4.450E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1118463	monobutyltin trichloride	282.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111875	1-OCTANOL	130.00	SRC	7.940E-02	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
111900	DIETHYLENE GLYCOL MONOETHYL ETHER	134.00	SRC	1.260E-01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	5.62E-06	3.75E-07	9.37E-07	2.49E-05	1.24E-05	1.65E-06	T
1119400	PENTANEDIOIC ACID, DIMETHYL ESTER	160.00	ALD	1.890E+00	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1120010	sodium cetearyl sulfate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112005	laurtrimonium chloride					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1120214	N-UNDECANE	156.00	SRC	4.119E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112072	2-BUTOXYETHANOL ACETATE	160.00	SRC	3.750E-01	WEBER,RC ET	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112129	UNDECANONE	170.00	ALD	4.140E-02	PERRY,RH & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112152	CARBITOL ACETATE	176.00	SRC	1.481E-01	YAWS,CL (199	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112174	DECYL ACETATE	200.00		3.470E-03	HEATH,RR & T	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112243	TRIETHYLENETETRAAMINE	146.00	ALD	4.121E-04	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112276	TRIETHYLENE GLYCOL	150.00	SRC	1.320E-03	DAUBERT,TE &	0	0.10000	0.10000	0.10000	7.49E-09	4.99E-10	1.25E-09	3.31E-08	1.66E-08	2.20E-09	T
112301	1-DECANOL	158.00	SRC	8.510E-03	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112312	N-DECANAL	156.00	SRC	1.030E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112345	DIETHYLENE GLYCOL MONO-N-BUTYL ETHER	162.00	SRC	2.190E-02	DAUBERT,TE &	0	100.00000	100.00000	100.00000	3.02E-06	2.01E-07	5.04E-07	1.34E-05	6.69E-06	8.86E-07	T
112367	BIS (2-ETHOXY ETHYL) ETHER	162.00	SRC	5.205E-01	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112389	UNDECYLENIC ACID	184.00	ALD	4.270E-04	PERRY,RH & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112403	DODECANE	170.00	EFDB	1.360E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1124045	parachlorometaxyleneol	157.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112414	N-DODECENE	168.00	SRC	1.594E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112425	1-UNDECANOL	172.00		2.968E-03	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112505	ETHOXYTRIETHYLENE GLYCOL	178.00	ALD	2.240E-03	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112538	DODECANOL	186.00	SRC	8.480E-04	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112572	TETRAETHYLENEPENTAMINE	189.00	ALD	1.000E-02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112583	DI-N-HEXYL ETHER	186.00	SRC	4.610E-02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112607	TETRAETHYLENE GLYCOL	194.00	ALD	4.650E-05	YAWS,CL (199	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112709	1-TRIDECANOL	200.00	SRC	4.360E-04	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112721	1-TETRADECANOL	214.00	SRC	1.100E-04	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112801	OLEIC ACID	282.00	SRC	5.460E-07	SRC	0	0.10000	0.10000	0.10000	7.30E-03	5.15E-04	1.27E-03	3.44E-02	1.73E-02	2.20E-03	T
1128161	3,5-DICHLORO-2-(TRICHLOROMETHYL)PYRIDINE	265.00		2.880E-03	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112845	13-DECOSENAIMIDE (CIS)	338.00	SRC	5.820E-09	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112903	oleamine					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
112925	1-OCTADECANOL	271.00	SRC	2.700E-06	DAUBERT,TE &	0	0.00100	0.00100	0.00100	5.80E-02	6.73E-03	1.41E-02	4.66E-01	2.69E-01	2.14E-02	T
112958	EICOSANE	283.00		4.619E-06	ZWOLINSKI,BJ	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
114261	PROPOXUR	209.00	HCDR	3.000E-06	HOWARD,PH. (	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
114830	2-phenylhydrazide acetic acid					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
115071	PROPENE	42.00	SRC	8.690E+03	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
115106	DIMETHYL ETHER	46.00	SRC	4.450E+03	RIDDICK,JA E	0	0.00100	0.00100	0.00100	2.00E-01	3.97E-02	6.71E-02	1.00E+00	9.90E-01	8.81E-02	T
115117	ISOBUTENE	56.00		7.800E-01	HOFF,MC ET A	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
115297	ENDOSULFAN	407.00	HSDB	1.000E-05	HOWARD, P.H.	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
115695	2-AMINO-2-METHYLPROPANEDIOL	105.00	ALD	6.540E-03	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
115775	PENTAERYTHRITOL	136.00	SRC	1.510E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
115957	LINALYL ACETATE	196.00	SRC	9.716E-02	PERRY,RH & G	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F



Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
117817	BIS(2-ETHYLHEXYL)PHTHALATE	391.00	SRC	9.750E-06	HOWARD,PH. (	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
117828	BIS(METHOXYETHYL)PHTHALATE	282.00	SRC	2.430E-04	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
117840	DIOCTYL PHTHALATE	391.00	SRC	2.600E-06	PERWAK,J ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
118581	BENZYL SALICYLATE	226.00	SRC	3.370E-06	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
118967	2,4,6-TRINITROTOLUENE	227.00	SRC	8.020E-06	SPANGGORD,RJ	0	100.00000	100.00000	100.00000	8.97E-05	5.98E-06	1.50E-05	3.97E-04	1.99E-04	2.63E-05	T
118967	TRITON DF-16	227.00	SRC	8.020E-06	SRC	0	100.00000	100.00000	100.00000	8.97E-05	5.98E-06	1.50E-05	3.97E-04	1.99E-04	2.63E-05	T
118967	TRITON N-42	227.00	SRC	8.020E-06	SRC	0	100.00000	100.00000	100.00000	8.97E-05	5.98E-06	1.50E-05	3.97E-04	1.99E-04	2.63E-05	T
118967	TRITON CA	227.00	SRC	8.020E-06	SRC	0	100.00000	100.00000	100.00000	8.97E-05	5.98E-06	1.50E-05	3.97E-04	1.99E-04	2.63E-05	T
118967	triton	227.00	HSDB	2.000E-04	HSDB	0	100.00000	100.00000	100.00000	8.97E-05	5.98E-06	1.50E-05	3.97E-04	1.99E-04	2.63E-05	T
118967	triton cf	227.00	HSDB	2.000E-04	HSDB	0	100.00000	100.00000	100.00000	8.97E-05	5.98E-06	1.50E-05	3.97E-04	1.99E-04	2.63E-05	T
11900	carbitol	134.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1191168	isopent-2-enyl acetate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1192183	1,2-DIMETHYLCYCLOPENTANE (CIS)	98.00		4.720E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
119368	METHYL SALICYLATE	152.00	ALD	3.430E-02	DAUBERT,TE &	0	0.00100	0.00100	0.00100	2.23E-04	1.49E-05	3.72E-05	9.87E-04	4.94E-04	6.54E-05	T
1194656	2,6-DICHLOROBENZONITRILE	172.00	EFDB	5.500E-04	WSSA (1983)	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
119619	BENZOPHENONE	182.00	SRC	1.930E-03	YAWS,CL (199	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
119642	TETRALIN	132.00	SRC	3.680E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12000576	burnt sienna					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12001262	mica					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12001319	BENTONE 38					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12001853	zinc naphthenate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
120321	5-CHLORO-2-HYDROXYDIPHENYLMETHANE	219.00	SRC	5.060E-05	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
120401	diethanolamide of lauric acid	288.00	HCDR	6.700E-09	NEELY,WB & B	0	0.00100	0.00100	0.00100	3.77E-10	2.51E-11	6.29E-11	1.67E-09	8.35E-10	1.11E-10	T
120401	N,N-DI(2-HYDROXYETHYL)LAURAMIDE	289.00		6.700E-09	NEELY,WB & B	0	0.00100	0.00100	0.00100	3.77E-10	2.51E-11	6.29E-11	1.67E-09	8.35E-10	1.11E-10	T
120456	2-phenyl ethyl propionate	178.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
120570	PIPERONAL	150.00	SRC	1.000E-02	PERRY,RH & G	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
120785	2,2'-DITHIOBISBENZOTHAZOLE	332.00	SRC	2.540E-10	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
120854	1,2,4-trimethylpiperazine					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12108133	methylcyclopentadienyl manganese	218.00	ALD			0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12125029	AMMONIUM CHLORIDE	53.00	Chemfinder	2.420E-03	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
121448	TRIETHYLAMINE	101.00	SRC	5.707E+01	RIDDICK,JA E	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12173476	hectorite					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12174117	Attagel 40					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
121755	MALATHION	330.00	HCDR	7.900E-06	HOWARD, P.H.	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12199370	natural smectite clay					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
122190	stearyl dimethylbenzyl ammonium chloride	424.00	Chemfinder			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
12227893	black oxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
122327	glyceryl trioleate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
122467327	succinate tartrate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
122521	triethyl phosphite	166.00	ALD			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
122623	dioctyl sebacate	427.00	HCDR			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
122634	benzylpropionate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
122781	PHENYLACETALDEHYDE	120.00	SRC	3.920E-01	JONES,AH (19	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
122996	2-PHENOXYETHANOL	138.00	SRC	7.000E-03	DOW CHEMICAL	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
123057	2-ETHYLHEXANAL	128.00		1.960E+00	LEWIS,RJ (19	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
123115	P-ANISALDEHYDE	136.00	SRC	3.290E-02	OHE,S (1989)	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
123193	DI(N-PROPYL) KETONE	114.00		1.175E+00	OHE,S (1976)	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
123319	HYDROQUINONE	110.00	ALD	6.700E-04	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
123353	3-METHYLENE-7-METHYL-1,6-OCTADIENE (MY	136.00		2.014E+00	PERRY,RH & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
123422	4-HYDROXY-4-METHYL-2-PENTANONE	116.00	SRC	1.710E+00	DAUBERT,TE &	0	100.00000	100.00000	100.00000	1.16E-06	7.76E-08	1.94E-07	5.16E-06	2.58E-06	3.42E-07	T
123728	BUTYRALDEHYDE	72.00		1.114E+02	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
123739	TRANS-CROTONALDEHYDE	70.00		3.000E+01	LEWIS,RJ (19	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
123864	N-BUTYL ACETATE	116.00	SRC	1.151E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
123911	1,4-DIOXANE	88.00	EFDB	3.809E+01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	2.22E-03	1.50E-04	3.73E-04	9.92E-03	4.97E-03	6.55E-04	T
123922	ISOAMYL ACETATE	130.00	ALD	5.600E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
123944	Emerest 2407					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
123955	N-BUTYL STEARATE	341.00	SRC	5.800E-06	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
124049	HEXANEDIOIC ACID	146.00	SRC	7.300E-02	DANLY,DE & C	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
124072	OCTANOIC ACID	144.00	SRC	3.440E-03	DAUBERT,TE &	0	0.00100	0.00100	0.00100	2.19E-04	1.46E-05	3.65E-05	9.71E-04	4.85E-04	6.43E-05	T
124094	HEXAMETHYLENEDIAMINE	116.00	ALD	1.180E-01	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
124118	ISONONENE	126.00		5.390E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
124130	OCTANAL	128.00	SRC	1.180E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
124163	1-(2-butoxyethoxy)-2-propanol	176.00	HCDR			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
124174	DIETHYLENE GLYCOL MONOBUTYL ETHER AC	204.00	SRC	4.000E-02	FLICK,EW (19	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
124185	N-DECANE	142.00	SRC	1.430E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1241947	2-ETHYLHEXYL DIPHENYL PHOSPHATE	362.00	SRC	6.290E-05	HL X WSOL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
124196	NONANAL	142.00	SRC	3.700E-01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
124389	CARBON DIOXIDE	44.00	SRC	4.828E+04	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
124403	DIMETHYLAMINE	45.00	EFDB	1.520E+03	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
124685	2-AMINO-2-METHYL-1-PROPANOL	89.00	SRC	1.000E+00	FLICK,EW (19	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
124765	BICYCLO 2.2.1 HEPTAN-2-OL, 1,7,7-TRIMETH	154.00		3.530E-02	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1248186	lithol Red					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
125122	isobornyl acetate					0	0.00099	0.00099	0.00099	4.07E-03	2.78E-04	6.91E-04	1.85E-02	9.30E-03	1.21E-03	T
126114	2-HYDROXYMETHYL-2-NITRO-1,3-PROPANEDIOL	151.00	ALD	1.540E-06	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
126136	sucrose acetate isobutyrate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
126158	2,3,4,5-bis(2-butylene)tetrahydro-2-fura					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12626492	DOWFAX 2A-1					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12656858	molybdate orange					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
126589	dipentaerythritol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
126738	TRIBUTYLPHOSPHATE	266.00	SRC	1.200E-04	RIDDICK,JA E	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
126818	5,5-DIMETHYL-1,3-CYCLOHEXANEDIONE	140.00	SRC	6.390E-02	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
126863	Surfynol 104					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12688287	NEODOL 25-3S					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
126910	linalool					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
126921	2-ethyl hexyl sulfate sodium sal	233.00	HCDR			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12712731	Strodx PK-90					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
127184	TETRACHLOROETHENE	166.00	EFDB	1.860E+01	RIDDICK,JA E	0	0.10000	0.10000	0.10000	1.16E-01	2.43E-02	3.94E-02	1.00E+00	9.88E-01	5.08E-02	T
12736968	sodium potassium aluminum silicate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
127479	vitamin A acetate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12767838	Victawet 35B					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1277184	1,1,4-trimethylcyclohexane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1277184	1,1,3-trimethylcyclohexane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12794568	Nopco NXZ					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
12795130	cyan blue					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
128041	DIMETHYLDITHIOCARBAMIC ACID, SODIUM SA	143.00	HCDR	4.170E-09	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
128370	2,6-DI-T-BUTYL-4-METHYLPHENOL (BHT)	220.00	SRC	5.160E-03	PERRY,RH & G	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
128449	sodium saccharinate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1300716	XYLENOL	611.00	HCDR	9.570E-02	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1300727	sodium xylene sulfonate	208.00	ALD			0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
1302789	bentonite clay					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1303964	sodium borate	381.00	Chemfinder			0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
1305620	calcium hydroxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
1305788	calcium oxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1305799	calcium peroxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1309371	red iron oxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1309371	yellow iron oxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1309428	magnesium hydroxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1309484	magnesium oxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1309600	lead dioxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1310583	potassium hydroxide	56.00	Chemfinder			0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
1310663	lithium hydroxide monohydrate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1310732	SODIUM HYDROXIDE	40.00	SRC	1.000E+00	OHE,S (1976)	0	0.10000	0.10000	0.10000	4.93E-05	3.28E-06	8.21E-06	2.18E-04	1.09E-04	1.45E-05	T
13108526	Dowicil S-13					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1311113	DIMETHYL PHTHALATE	194.00	SRC	1.650E-03	HOWARD,PH ET	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1312762	potassium silicate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
1314122	zinc oxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
13150817	2,6-dimethyldecane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
13151343	3-methyldecane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
13151354	5-methyldecane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
131522	PENTACHLOROPHENOL, NA SALT	288.00	SRC	2.700E-11	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1317653	limestone					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1317971	ultramarine blue					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1318021	ZEOLITE 4A					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1318747	kaolinite					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1319773	CRESOL	324.00	HCDR	1.700E-01	POPENDORF,W	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1321944	METHYL NAPHTHALENES	142.00		2.780E-02	NEELY,WB & B	0	0.10000	0.10000	0.10000	4.29E-02	3.73E-03	8.65E-03	2.44E-01	1.31E-01	1.42E-02	T
132274	2-PHENYLPHENOL, SODIUM SALT	192.00	SRC	1.900E-11	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1323393	propylene glycol stearate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
132649	DIBENZOFURAN	168.00	EFDB	2.480E-03	CHIRICO,RD E	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
132739312	dipropylene glycol butyl ether					0	0.00099	0.00099	0.00099	5.31E-03	3.63E-04	9.02E-04	2.40E-02	1.21E-02	1.58E-03	T
1327419	aluminum chlorohydrate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1327431	magnesium aluminum silicate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
1328536	phthalocyanine green					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1330161	PINENE	297.00		5.000E+00	VERSCHUEREN	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1330207	XYLENES	106.00	ALD	7.990E+00	DAUBERT,TE &	0	0.10000	0.10000	0.10000	1.36E-01	2.59E-02	4.42E-02	9.97E-01	9.44E-01	5.85E-02	T
133062	CAPTAN	301.00	EFDB	6.000E-05	GILE,JD & GI	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1331926	amyl cinnamic aldehyde					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1332098	pumice					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1332214	asbestos					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1332587	kaolin					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1333831	sodium bifluoride					0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1333864	carbon black/lampblack					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1335304	aluminum silicate hydrate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1335462	methylionone					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1336216	AMMONIUM HYDROXIDE	35.00		2.159E+03	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1336932	manganese naphthenate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1338029	Troysan CMP acetate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1338029	Troysan Polyphase					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1338029	Troysan 192					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1338029	Troysan Polyphase AF1					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1338029	troysan cmp acetate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1338416	sorbitan stearate	431.00	Chemfinder			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
1338438	sorbitan oleate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
1338438	sorbitan monooleate	429.00	HSDB			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1340698	BENTONE 34 or 128					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
134149	ammonium bifluoride					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1341544	benzophenone-11					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1343880	magnesium silicate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1343982	Silicate N					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1344009	sodium aluminum silicate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1344098	sodium silicate	184.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
1344281	alumina					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1344361	white lead					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1344952	calcium silicate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1345057	lithopone					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1345273	burnt umber					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
134623	DEET [N,N-DIET-3-ME BENZAMIDE]	191.00	ALD	5.600E-03	LITTLE,AD (1	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
13462867	barytes					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
13463677	titanium dioxide					0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
13466789	3-CARENE (DELTA)	136.00	SRC	3.720E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
13472305	SODIUM ORTHOSILICATE	184.00	SRC			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
13537332	fluorosilane compounds					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
13547074	2-CHLORO-4-(1-CHLOROVINYL)CYCLO-1-HEXE	177.00		8.900E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
135886	N-PHENYL-2-NAPHTHYLAMINE	219.00	SRC	8.290E-06	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
135988	SEC-BUTYLBENZENE	134.00	SRC	1.752E+00	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
136458	DIPROPYL PYRIDINE-2,5-DICARBOXYLATE	251.00		5.480E-04	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
137053	METHYL 2-CYANO-2-PROPENOATE	111.00	HCDR	7.960E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
137166	sodium lauroyl sarcosinate	293.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
137166	hamposyl I-30	293.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
137268	THIRAM	240.00	SRC	1.725E-05	TOMLIN,C (19	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
137326	2-METHYL-1-BUTANOL	88.00	SRC	3.120E+00	RIDDICK,JA E	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
13776744	talc (magnesium silicate)					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
138227	BUTYL LACTATE	146.00		4.000E-01	FLICK,EW (19	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
13845368	potassium tripolyphosphate	458.00	Chemfinder			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
13870309	sodium trisilicate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
138863	LIMONENE	136.00		1.548E+00	BOUBLIK,T ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
139139	NITRILOTRIACETIC ACID	191.00	SRC	3.000E-05	BANERJEE,S E	0	0.10000	0.10000	0.10000	2.78E-08	1.86E-09	4.64E-09	1.23E-07	6.16E-08	8.17E-09	T
139333	disodium EDTA					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
139899	trisodium HEDTA					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
139968	triethanolamine lauryl sulphate					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
140114	BENZYL ACETATE	150.00	EFDB	1.770E-01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
140318	N-aminoethylpiperazine					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
14038438	iron blue pigment					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
14038438	Milori blue					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
140578	ARAMITE	335.00	SRC	2.180E-07	NEELY,WB & B	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1406184	vitamin E					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
140670	1-methoxy-4-(1-propenyl) benzene					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1406708	tocopherol acetate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
141128	neryl acetate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
141231	12-hydroxy-octadecanoic acid met					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
141435	ETHANOLAMINE	61.00	SRC	4.040E-01	DOW CHEMICAL	0	100.00000	100.00000	100.00000	1.51E-05	1.01E-06	2.53E-06	6.71E-05	3.35E-05	4.44E-06	T
141537	sodium formate	68.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
141639	DODECAMETHYLPENTASILOXANE	385.00		1.022E-01	JORDAN,TE (1	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
141786	ETHYL ACETATE	88.00	SRC	9.366E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
141797	MESITYL OXIDE	98.00	SRC	8.210E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
141935	M-DIETHYLBENZENE	134.00		1.130E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
142290	CYCLOPENTENE	68.00	SRC	3.805E+02	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
142596	NABAM	256.00	HCDR	0.000E+00	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
142621	HEXANOIC ACID	116.00	SRC	4.350E-02	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
142789	2-AMINOETHANE DODECANOATE	243.00		6.570E-09	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
142825	N-HEPTANE	100.00	SRC	4.600E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
142916	ISOPROPYL PALMITATE	299.00	SRC	5.589E-05	BOUBLIK,T ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
142961	DI-N-BUTYL ETHER	130.00	SRC	6.010E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
143077	DODECANOIC ACID	200.00	SRC	1.602E-05	YAWS,CL (199	0	0.00099	0.00099	0.00099	1.91E-03	1.29E-04	3.21E-04	8.57E-03	4.29E-03	5.64E-04	T
143088	1-NONANOL	144.00		2.270E-02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
143180	potassium oleate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
143191	OLEIC ACID, SODIUM SALT	305.00	ALD	1.000E-12	NEELY,WB & B	0	0.00099	0.00099	0.00099	1.00E-15	0.00E+00	0.00E+00	3.00E-15	2.00E-15	0.00E+00	F
143226	TRIETHYLENE GLYCOL BUTYL ETHER	206.00		2.500E-03	CLAYTON,GD &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
143282	OLEYL ALCOHOL (CIS)	252.00	SRC	9.300E-05	ANTOINE EQUA	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
14351509	oleamine oxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
14450056	pentaerythrityl tetrapelargonate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
144558	sodium bicarbonate	84.00	ALD			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
14484641	FERBAM	416.00				0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
14492683	steapyrium chloride					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
14492683	Quaternium-7					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
14676290	3-ethyl-2-methylheptane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
147148	PIGMENT BLUE 15	578.00				0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
14807966	talc	379.00	ALD			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1490046	menthol	156.00	ALD			0	0.00100	0.00100	0.00100	1.23E-03	8.29E-05	2.07E-04	5.50E-03	2.76E-03	3.63E-04	T
149304	2-MERCAPTOBENZOTHAZOLE	167.00	SRC	4.640E-04	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
149575	HEXANOIC ACID, 2-ETHYL-	144.00	HCDR	3.000E-02	FLICK,EW (19	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
14986846	sodium tetraphosphate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
150130	4-AMINOBENZOIC ACID	137.00	SRC	2.780E-04	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
15097388	phenyl methyl ester acetic acid					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
151213	DODECYL SULFATE, SODIUM SALT	288.00	ALD	0.000E+00	NEELY,WB & B	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
151677	HALOTHANE	197.00	ALD	3.020E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
15220856	tetraisobutylene					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1562001	sodium isethionate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
15625895	TMPTA					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
156592	1,2-DICHLOROETHENE (CIS)	97.00		2.010E+02	BOUBLIK,T ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1569013	1-PROPOXY-2-PROPANOL	118.00	SRC	1.700E+00	BROWN,ES ET	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1582098	TRIFLURALIN	335.00	HCDR	4.850E-05	VERSCHUEREN,	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
15869859	5-methylnonane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
15890401	1-(TRANS), 2(CIS), 3-TRIMETHYLCYCLOPENTAN	112.00		3.204E+01	ZWOLINSKI,BJ	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
15892236	sec-butyl alcohol	74.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1589475	2-methoxy-1-propanol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1610180	PROMETON	225.00	HSDB	5.000E-06	VERSCHUEREN,	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1634044	METHYL T-BUTYL ETHER	88.00	HCDR	2.490E+02	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1634205	lauryldimethylamine oxide	229.00	SRC			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1638262	1,1-DIMETHYLCYCLOPENTANE	98.00		7.620E+01	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1639663	DI-N-OCTYL SODIUM SULFOSUCCINATE	445.00		0.000E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1640897	ETHYLCYCLOPENTANE	98.00		3.982E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
16409453	MENTHYL ACETATE	198.00	SRC	1.017E-01	PERRY,RH & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1643205	N,N-DIMETHYLDODECYLAMINE OXIDE	229.00	EFDB	6.230E-08	NEELY,WB & B	0	0.00100	0.00100	0.00100	3.16E-03	2.15E-04	5.35E-04	1.43E-02	7.17E-03	9.35E-04	T
16747265	2,2,4-TRIMETHYLHEXANE	128.00	SRC	1.590E+01	BOUBLIK,T ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
16747312	3,3,4-TRIMETHYLHEXANE	128.00	SRC	8.872E+00	ZWOLINSKI,BJ	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1678917	ETHYL CYCLOHEXANE	112.00	SRC	1.283E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1678928	N-PROPYL CYCLOHEXANE	126.00	SRC	4.192E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1678939	BUTYL CYCLOHEXANE	140.00	SRC	1.314E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1678973	1,2,3-trimethylcyclohexane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
17301234	2,6-dimethylundecane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
17301336	4,8-dimethylundecane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
17301530	Genamin KDM					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
17301530	behentrimonium chloride					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
17301949	4-methylnonane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
17302282	2,6-dimethylnonane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
17302373	2,2-dimethyldecane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1746130	ALLYLPHENYL ETHER	134.00		5.910E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1758889	2-ETHYL-1,4-DIMETHYLBENZENE	134.00	SRC	9.392E-01	CHAO,J ET AL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
17804352	BENOMYL	290.00		3.700E-09	WEBER,JB (19	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
17831719	2-PROPENOIC ACID, OXYBIS(2,1-ETHANEDIYL)	302.00		3.080E-04	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1812539	dicetyldimonium chloride	530.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
1839630	c,c,t-1,3,5-trimethylcyclohexane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
18422054	amp regular	365.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
18472510	chlorhexidine digluconate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1847581	sodium lauryl sulfoacetate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
18479588	2,6-dimethyl-7-octen-2-ol					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1861321	DIMETHYL TETRACHLOROTEREPHTHALATE	332.00	EFDB	2.500E-06	GLOTFELTY,DE	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1861401	BENEFIN	335.00	EFDB	6.600E-05	WAUCHOPE,RD	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1863634	ammonium benzoate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1871574	2-(CHLOROMETHYL)-3-CHLORO-1-PROPENE	125.00		5.570E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1886813	DODECYL BENZENESULFONATE	327.00		1.330E-07	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
1897456	CHLOROTHANONIL	266.00	SRC	3.400E-07	HL X WSOL	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1897456	Nopocicide N-96	266.00	SRC	3.400E-07	SRC	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
19004879	isooctylphenoxypolyethoxyethanol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1912249	ATRAZINE	216.00	EFDB	3.000E-07	HOWARD, P.H.	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1912830	stannous octoate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1918009	DICAMBA	221.00	HCDR	3.370E-05	WEBER,JB (19	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1929824	NITRAPYRIN	231.00	HCDR	2.800E-03	WAUCHOPE,RD	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1934210	FD&C yellow no. 5					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
1985973	1-ethyl-1-methylpropylbenzene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
20278891	trimethylheptane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
20324327	dipropylene glycol methyl ether					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2039896	2,5-dimethylstyrene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2049958	1,1-dimethylpropylbenzene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2051301	2,6-DIMETHYLOCTANE	142.00	SRC	2.946E+00	ZWOLINSKI,BJ	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2163806	MSMA	162.00	HCDR			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2207014	1,2-DIMETHYL CYCLOHEXANE (CIS)	112.00		1.449E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2207036	1,3-DIMETHYL CYCLOHEXANE (TRANS)	112.00		1.763E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2213232	2,4-dimethylheptane					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2216300	2,5-dimethylheptane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2216333	3-METHYLOCTANE	128.00	SRC	6.254E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2216344	4-METHYLOCTANE	128.00		6.831E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2216457	P-METHYLBENZYL ACETATE	164.00	SRC	6.240E-02	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2235543	ammonium lauryl sulfate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
2244215	sodium dichloroisocyanurate	237.00	HCDR			0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
22882957	isopropyl linoleate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2353459	FD&C green no. 3					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2366521	1-FLUOROBUTANE	76.00		5.780E+02	LI,JCM & ROS	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2425798	1,4-butanediol diglycidal ether	202.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2426086	GLYCIDYL N-BUTYL ETHER	130.00	ALD	4.440E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2437561	1-TRIDECENE	182.00	SRC	6.375E-02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
24634515	potassium sorbate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
24800440	TRIPROPYLENE GLYCOL	192.00	ALD	4.800E-04	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
24806324	di(phenylmercuric) dodeceny succinate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
24937788	ethylene/vinyl acetate polymer					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
24938918	ethoxylated tridecyl alcohol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
24938918	polyoxyethylene (6) tridecyl ether					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25013165	BUTYLATED HYDROXYANISOLE	361.00		2.480E-03	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25119680	butylester of pvm/ma copolymer					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25134218	methyl cycloheptene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25154523	NONYLPHENOL	220.00	ALD	9.416E-05	DAUBERT,TE &	0	0.00099	0.00099	0.00099	4.89E-07	3.26E-08	8.14E-08	2.16E-06	1.08E-06	1.43E-07	T
25155151	P-I-PROPYLTOLUENE	134.00		1.640E+00	PERRY,RH & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25155184	methylbenzethonium chloride					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25155300	DODECYLBENZENESULFONIC ACID, NA SALT	348.00	HCDR	0.000E+00	NEELY,WB & B	0	0.10000	0.10000	0.10000	9.93E-06	6.62E-07	1.66E-06	4.40E-05	2.20E-05	2.91E-06	T
25167673	butene					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25167719	ocimene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25168052	CHLOROTOLUENE	380.00		7.880E-01	NEELY,WB & B	0	0.10000	0.10000	0.10000	1.21E-01	2.13E-02	3.76E-02	9.77E-01	8.51E-01	5.07E-02	T
25231214	PPG-11 stearyl ether					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25265718	DIPROPYLENE GLYCOL	134.00	EFDB	3.190E-02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2530838	glycidoxypropyl trimethoxy silane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2530850	gamma-methacryloxypropyltrimethoxysilane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25321226	DICHLOROBENZENE	441.00	SRC	1.470E+00	RESENDES,J E	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25321419	xylene sulfonate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
25322683	POLYETHYLENE GLYCOL	62.00	Chemfinder	8.590E-01	NEELY,WB & B	0	0.00100	0.00100	0.00100	2.18E-05	1.45E-06	3.63E-06	9.65E-05	4.82E-05	6.39E-06	T
25322683	PEG-6 caprylic/capric glycerides	62.00	Chemfinder	8.590E-01	NEELY,WB & B	0	0.00100	0.00100	0.00100	2.18E-05	1.45E-06	3.63E-06	9.65E-05	4.82E-05	6.39E-06	T
25322683	PEG-600 dioleate	62.00	Chemfinder	8.590E-01	NEELY,WB & B	0	0.00100	0.00100	0.00100	2.18E-05	1.45E-06	3.63E-06	9.65E-05	4.82E-05	6.39E-06	T
25322683	PEG-4 distearate	62.00	Chemfinder	8.590E-01	NEELY,WB & B	0	0.00100	0.00100	0.00100	2.18E-05	1.45E-06	3.63E-06	9.65E-05	4.82E-05	6.39E-06	T
25322694	POLYPROPYLENE GLYCOL	192.00	SRC			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25339575	Pliolite WR-D					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25378227	2-dodecene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25496724	glyceryl oleate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25550145	METHYL ETHYL BENZENE	361.00	SRC	2.882E+00	AMBROSE,D ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25551137	TRIMETHYLBENZENES	361.00	HCDR	2.100E+00	BANERJEE,S E	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25620580	2,2,4 trimethylhexamethylenediam					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25644418	povidone iodine solution usp					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
25655418	poly(vinylpyrrolidone)-iodine complex					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
25852373	Primal ASE 60					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
26027383	Nonoxynol					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
2605789	octyl dimethyl amine oxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
26062793	Polyquaternium-6					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
26183528	EMULPHOGENE DA-630					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
26471625	2,4/2,6-TOLUENEDIISOCYANATE	174.00	EFDB	2.300E-02	HANN,RWJR &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2650182	FD&C Blue no. 1					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
26530201	3(2H)-ISOTHIAZOLONE, 2-OCTYL-	213.00		2.710E-05	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
26590056	Polyquaternium-7					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
26590089	Amberlac 165 Polymer					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
2687969	1-LAURYL-2-PYRROLIDONE	253.00		5.340E-06	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
26952216	ISOCTYL ALCOHOL	130.00		1.950E+00	FLICK,EW (19	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
26952238	DICHLOROPROPENE	444.00	SRC	2.400E+01	WEINJNEN,PHC	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
26967646	methylpropylcyclohexane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
27119079	polyacrylamidomethylpropanesulfonic acid					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
2717159	triethanolamine oleate	432.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
27176870	DODECYLBENZENESULFONIC ACID	327.00	SRC	7.900E-11	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
27195671	dimethylcyclohexane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
27213350	cyclodecadiene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
27247967	2-ethylhexyl nitrate	175.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
27321966	Choleth-24					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
27323417	dodecylbenzene sulfonate, triethanolamin	476.00	Chemfinder	4.760E+02		0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
27458931	isostearyl alcohol					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2781104	dibutyltin di-2-ethylhexoate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
27813021	hydroxyl propyl methacrylate	144.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
280579	1,4-DIAZABICYCLO(2,2,2)OCTANE (DABCO)	112.00	ALD	7.420E-01	YAWS,CL (199	0	0.00099	0.00099	0.00099	6.80E-05	4.53E-06	1.13E-05	3.01E-04	1.51E-04	1.99E-05	T
2807309	ETHYLENE GLYCOL MONOPROPYL ETHER	104.00	SRC	3.117E+00	YAWS,CL (199	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
28249776	THIOBENCARB	258.00	HSDB	2.200E-05	VERSCHUEREN,	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
28348643	AEROSOL OS					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
28473214	nonanal					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2847725	4-methyldecane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2870044	1,3-DIMETHYL-2-ETHYLBENZENE	134.00	SRC	7.386E-01	CHAO,J ET AL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
287230	CYCLOBUTANE	56.00		1.175E+03	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
28777675	dimethylhexane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
287923	CYCLOPENTANE	70.00	SRC	3.178E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2893789	sodium dichloro-s-triazinetrione	220.00	Chemfinder			0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
291645	CYCLOHEPTANE	98.00		2.160E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2921882	CHLORPYRIFOS	351.00	HSDB	1.700E-05	HOWARD, P.H.	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
29224553	ethylidimethylbenzene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
292648	CYCLOOCTANE	112.00		5.510E+00	OHE,S (1976)	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2958761	2-methyldecahydronaphthalene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
29714872	dimethyl octatriene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
2980690	4-methylundecane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
300572	ALLYLBENZENE	118.00		1.690E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3006153	sodium dihexyl sulfosuccinate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
301100	stannous-2-ethylhexyloate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
30361376	PMA-30					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
30361376	PMA-100					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
30361376	PMA-18					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
30361376	PMA-60					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
30381987	SCOTCHBAN FC 807					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
30399849	isostearic acid					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3048644	5-vinylbicyclo[2.2.1]heptene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
30498636	trimethylcyclohexane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
30498647	trimethylcyclopentane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
30498669	dimethylheptane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
30525894	PARAFORMALDEHYDE	30.00		1.055E+01	JORDAN,TE (1	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
30677340	ethylmethylcyclohexane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3073663	1,1,3-TRIMETHYLCYCLOHEXANE	126.00		1.081E+01	OHE,S (1976)	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3101608	d-tert butyl phenyl glycidyl eth	206.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
31335747	neopentylglycol dicaprylate/dicaprate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F



Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
31394715	PPG-36 oleate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
314409	BROMACIL	261.00	HCDR	2.500E-07	WORTHING,CR	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
31566311	glyceryl monostearate	359.00	HCDR			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
31566311	Emerest 2400	359.00				0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
31694550	Glycereth-12					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
31694550	Glycereth-26					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3178221	TERT-BUTYLCYCLOHEXANE	140.00		2.331E+00	CHAO,J ET AL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3179815	diethylaminoethyl stearate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
321302	adenine sulfate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3221612	2-METHYLOCTANE	128.00	SRC	6.214E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3234853	myristyl myristate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3252435	DIBROMOACETONITRILE	199.00	ALD	3.010E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
32612489	ammonium laureth sulfate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
333415	DIAZINON	304.00	EFDB	1.120E-02	SUNTIO,LR (1	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3380345	5-CHLORO-2-(2,4-DICHLOROPHENOXY)PHENOL	290.00	SRC	6.450E-07	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3393644	4-HYDROXY-3-METHYL-2-BUTANONE	102.00		2.258E-01	PERRY,RH & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
34513503	octyldodecanol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
34590948	DIPROPYLENE GLYCOL METHYL ETHER	148.00	SRC	5.500E-01	DOW CHEMICAL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
3478942	piperalin					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3522949	2,2,5-TRIMETHYLHEXANE	128.00		1.656E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
35274056	cetyl lactate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
35287695	sad					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3531430	2-ethylcyclobutanol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
354585	1,1,1-TRICHLORO-2,2,2-TRIFLUOROETHANE	187.00	ALD	3.600E+02	BOUBLIK,T ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3567666	D&C Red no. 33					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
35691657	Tektamer 38					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
36396993	CHA					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
36409571	disodium laureth sulfosuccinate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3655003	disodium lauriminodipropionate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
36653824	1-HEXADECANOL	242.00	SRC	3.060E-06	LITTLEWOOD,R	0	100.00000	100.00000	100.00000	1.22E-02	8.85E-04	2.16E-03	5.91E-02	3.00E-02	3.72E-03	T
3689245	SULFOTEPP	322.00	HCDR	1.695E-04	BACCI,E ET A	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3691121	alpha-guaiene					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
37139994	oleaikonium chloride					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
37199818	Tamol 731					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
37244614	ACRYSOL ASE-108 Stabilizer					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
3726474	1-METHYL-3-ETHYLCYCLOPENTANE	112.00		6.292E+00	CHAO,J ET AL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
37281484	Triton H-66					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
37300235	zinc yellow					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
37301443	Busan 25					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
37325114	ACRYSOL ASE-60					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
3777693	2-pentylfuran					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
39236469	imidazolidinyl urea	388.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
39291253	ORVUS K					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
39386884	Advawet 33					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
39404507	Paraplex G-50					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
39421755	hydroxypropyl guar					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
40117451	2,2,6,6-tetramethylheptane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4065456	benzophenone-4					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4080313	Dowicil 100	251.00				0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4080313	N-(3-CHLORALLYL) HEXAMINIUM CHLORIDE	251.00		4.190E-09	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4098719	isophorone diisocyanate	222.00	ALD			0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
4170303	CROTONALDEHYDE	70.00		3.000E+01	WEBER,RC ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4193559	TINOPAL UNPA					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4195839	propylene glycoldipelargonate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4223034	tert-octylacrylamide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
42415703	sodium lauroyl lactylate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4253343	methyltriacetoxysilane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4292926	PENTYL CYCLOHEXANE	154.00	SRC	3.720E-01	ZWOLINSKI,BJ	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
43119477	tocopherol nicotinate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
434640	OCTAFLUOROTOLUENE	236.00	SRC	2.900E+01	BOUBLIK,T ET	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4412913	3-HYDROXYMETHYLFURAN	98.00		4.290E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4621049	4-isopropyl cyclohexanol					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
464062	2,2,3-TRIMETHYLBUTANE	100.00		1.020E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
470826	1,8-CINEOLE	154.00	SRC	1.900E+00	RIDDICK,JA E	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
471341	calcium carbonate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4722989	monoethanolamine lauryl sulfate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
475207	longifolene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4792158	pentaethylene glycol	238.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
4812208	O-ISOPROPOXYPHENOL	152.00	SRC	1.480E-02	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
488233	1,2,3,4-TETRAMETHYLBENZENE	134.00	SRC	3.607E-01	CHAO,J ET AL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
490175	cocamine					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
493016	CIS-BICYCLO[4.4.0]DECANE	138.00	EFDB	7.860E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
493027	trans-bicyclo[4.4.0]decane	138.00	EFDB	1.200E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
493027	TRANS-BICYCLO[4.4.0]DECANE	138.00	EFDB	1.220E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
496117	INDANE	118.00	SRC	1.467E+00	BOUBLIK,T ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
497198	sodium carbonate	106.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
50000	FORMALDEHYDE	30.00	SRC	3.886E+03	BOUBLIK,T ET	0	0.10000	0.10000	0.10000	1.77E-04	1.18E-05	2.94E-05	7.82E-04	3.91E-04	5.18E-05	T
50215	LACTIC ACID	90.00	SRC	8.130E-02	DAUBERT,TE &	0	100.00000	100.00000	100.00000	4.46E-09	2.97E-10	7.43E-10	1.97E-08	9.86E-09	1.31E-09	T
502998	3,7-dimethyl-1,3,7-octatriene					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
504632	1,3-PROPANEDIOL	76.00		4.410E-02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
504756	imidazoline					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
50641184	CYCLO SOL 53					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5064313	nitrilotriacetic acid, Na salt	257.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
506525	hexacosanal					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
506876	ammonium carbonate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
50691	RIBOSE	150.00	SRC	8.550E-07	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
50704	SORBITOL	182.00	SRC	4.920E-09	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
507700	BORNEOL	154.00	SRC	3.530E-02	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
50791872	acetamide, n, n'-(ethenylmethyl-					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
50817	ASCORBIC ACID	176.00	SRC	2.490E-10	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
50895	THYMIDINE	242.00		0.000E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
50997	GLUCOSE	180.00	SRC	1.820E-08	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5102830	diarylide yellow					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
51036	PIPERONYL BUTOXIDE	338.00	SRC	2.600E-07	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
51229788	dowicil 200					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5124301	methylene bis (4-cyclohexylisocy	262.00	HCDR			0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5131668	propylene glycol monobutyl ether					0	0.00099	0.00099	0.00099	4.69E-03	3.20E-04	7.96E-04	2.12E-02	1.07E-02	1.39E-03	T
513359	2-METHYL-2-BUTENE	70.00		4.596E+02	PERRY,RH & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5160021	FD&C yellow no. 6					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5160021	Red Lake C (non-resinated)					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
51711791	GAFAC RE-610 organic phosphate ester					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5171846	3,3,4,4-tetramethylhexane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
51796191	Thixatrol ST					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
51812807	Quaternium-22					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
51938580	triton cf-54					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
52019360	GAFAC RA-600					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
52276832	phosph. nonylphenoxy polyethoxy ethanol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
52292178	Isosteareth-2					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
52357707	brown iron oxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
52439744	Alacsan 7LUF					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
52439937	Chemacoil TA-100					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
52517	Bronopol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
52645531	PERMETHRIN	391.00	HCDR	9.750E-09	WORTHING,CR	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
526738	1,2,3-TRIMETHYLBENZENE	120.00	SRC	1.689E+00	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
526954	D-GLUCONIC ACID	196.00	Chemfinder	3.720E-10	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
527071	sodium gluconate	218.00	Chemfinder			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
527537	1,2,3,5-TETRAMETHYLBENZENE	134.00	SRC	4.977E-01	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
527844	1-METHYL-2-ISOPROPYLBENZENE	134.00	SRC	1.500E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
532321	BENZOIC ACID, SODIUM SALT	144.00	SRC	3.670E-09	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
533675	2-deoxyribose					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
533960	sodium sesquicarbonate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
53535334	HEPTANOL	349.00	SRC	2.344E-01	JORDAN,TE (1	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
535773	M-CYMENE	134.00	SRC	1.720E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
53633548	Polyquaternium-11					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
538932	ISOBUTYLBENZENE	134.00	SRC	1.930E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
540181	PENTYL BUTYRATE	158.00		5.690E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	7.04E-02	7.87E-03	1.68E-02	5.05E-01	2.97E-01	2.57E-02	T
540670	ETHYL METHYL ETHER	60.00	SRC	1.506E+03	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
540801	trimethylpentane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
540841	2,2,4-TRIMETHYLPENTANE	114.00	SRC	4.930E+01	DAUBERT,TE &	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
540976	DODECAMETHYLCYCLOHEXASILOXANE	445.00		4.940E-02	JORDAN,TE (1	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
541026	DECAMETHYLCYCLOPENTASILOXANE	371.00	SRC	2.000E-01	FLANINGAM,OL	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
541059	HEXAMETHYLCYCLOTRISILOXANE	222.00	SRC	3.529E+00	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
541115	NICOTINE	162.00	HCDR	3.800E-02	BOUBLIK,T ET	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5421465	ammonium thioglycolate	108.00	HCDR			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
542756	TRANS-1,3-DICHLOROPROPENE	111.00	EFDB	3.400E+01	DILLING,WL (	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5437456	benzyl bromoacetate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
54392153	Proxel CRL					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
544763	N-HEXADECANE	226.00	SRC	1.430E-03	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5466773	octyl methoxycinnamate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
546930	magnesium carbonate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
548087	potassium carbonate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
5502885	1-methyl-4-(1-methylethyl) 1,3-cyclohexa					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
55389	FENTHION	278.00	HCDR	3.000E-05	WORTHING,CR	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
55406536	Polyphase					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
554121	METHYL PROPIONATE	88.00		8.404E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
55630	1,2,3-PROPANETRIOL TRINITRATE	227.00	HCDR	2.000E-04	KEMP,MD ET A	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
556616	METHYL ISOTHIOCYANATE	73.00	ALD	3.542E+00	BOUBLIK,T ET	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
556672	OCTAMETHYLTETRAILOXANE	297.00	SRC	1.050E+00	FLANINGAM,OL	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
55725081	PPG-1 Isodeceth-12					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5593704	tetrabutyl titanate	340.00	HCDR			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
55956213	2-methoxymethylethoxy propanol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5595849	Kathon					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5598130	CHLORPYRIFOS METHYL	323.00	HCDR	4.200E-05	TOMLIN,C (1	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBLRATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
56188	dipropylene triamine	131.00	HCDR			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
56235	CARBON TETRACHLORIDE	154.00	EFDB	1.150E+02	BOUBLIK,T ET	0	100.00000	100.00000	100.00000	1.21E-01	2.54E-02	4.11E-02	1.00E+00	9.91E-01	5.29E-02	T
562492	3,3-DIMETHYLPENTANE	100.00	SRC	8.270E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
563586	1,1-DICHLOROPROPENE	111.00		9.075E+01	WEBER,RC ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
56359	BIS(TRI-N-BUTYL TIN) OXIDE	596.00	HCDR	6.400E-07	MAGUIRE,RJ E	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
56359	tributyl tin oxide	596.00	HCDR	6.400E-07	MAGUIRE,RJ E	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
565593	2,3-DIMETHYLPENTANE	100.00		6.890E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
565695	2-METHYL-3-PENTANONE	100.00		1.811E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
565753	2,3,4-TRIMETHYLPENTANE	114.00	SRC	2.710E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
56802994	chlorinated trisodium phosphate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
56815	GLYCEROL	92.00	SRC	1.680E-04	DAUBERT,TE &	0	0.00100	0.00100	0.00100	5.34E-06	3.56E-07	8.89E-07	2.36E-05	1.18E-05	1.57E-06	T
56863026	Linoleamide DEA					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
57067	3-ISOTHIOCYANATO-1-PROPENE	99.00	SRC	3.698E+00	BOUBLIK,T ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
57090	Bromat					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
57103	PALMITIC ACID	256.00	SRC	1.986E-09	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
57114	STEARIC ACID	284.00	SRC	7.221E-07	DAUBERT,TE &	0	0.00100	0.00100	0.00100	8.42E-05	5.61E-06	1.40E-05	3.73E-04	1.86E-04	2.47E-05	T
57126	urea					0	0.00099	0.00099	0.00099	6.65E-10	4.43E-11	1.11E-10	2.94E-09	1.47E-09	1.95E-10	T
57136	UREA	60.00	ALD	1.200E-05	JONES,AH (19	0	0.00099	0.00099	0.00099	6.65E-10	4.43E-11	1.11E-10	2.94E-09	1.47E-09	1.95E-10	T
57157843	atlox					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
57195263	REWOCOR B3010					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5742198	super d pro					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
574936	phthalocyanine					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
57501	SUCROSE	342.00	SRC	0.000E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
57533901	diisocetyl adipate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
57556	1,2-PROPANEDIOL	76.00	SRC	1.290E-01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	3.39E-06	2.26E-07	5.66E-07	1.50E-05	7.51E-06	9.95E-07	T
577117	BIS(2-ETHYLHEXYL) SODIUM SULFOSUCCINAT	445.00	HCDR	2.200E-11	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
583573	1,2-DIMETHYLCYCLOHEXANE	112.00	SRC	1.447E+01	HINE,J & MOO	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
584021	3-PENTANOL	88.00	SRC	8.770E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
584032	1,2-BUTANEDIOL	90.00	HCDR	5.010E-02	DAUBERT,TE &	0	0.00100	0.00100	0.00100	7.17E-05	4.78E-06	1.20E-05	3.17E-04	1.59E-04	2.10E-05	T
584792	ALLETHRIN	302.00	SRC	1.200E-04	WORTHING,CR	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
584849	2,4-TOLUENE DIISOCYANATE	174.00	SRC	8.000E-03	BOUBLIK,T ET	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
584941	2,3-DIMETHYLHEXANE	114.00	SRC	2.340E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
586629	TERPINOLENE	136.00		5.950E-01	PERRY,RH & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
58748360	AMPHOMER					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
58748382	RESYN 28-2930					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
58817053	octyl dimethyl p-aminobenzoate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
58855	biotin					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
589344	3-METHYLHEXANE	100.00	EFDB	6.150E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
589394	3-METHYLHEXANE	100.00		6.150E+01		0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
589435	2,4-DIMETHYLHEXANE	114.00		3.040E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
589537	4-METHYLHEPTANE	114.00		2.050E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
58957	vitamin E acetate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
58968733	Surfynol PC					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
589811	3-METHYLHEPTANE	114.00	SRC	1.960E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
589902	1,4-DIMETHYLCYCLOHEXANE	112.00		1.788E+01	CHAO,J ET AL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
590012	N-BUTYL PROPIONATE	130.00	SRC	4.417E+00	YAWS,CL (199	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
59070563	PEG-20 glyceryl laurate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
590863	3-METHYL-1-BUTANAL	86.00		5.000E+01	CLAYTON,GD &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5911046	3-methylnonane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
591764	2-METHYLHEXANE	100.00	SRC	6.600E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
591786	2-HEXANONE	100.00	SRC	1.162E-01	AMBROSE,D ET	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
591935	1,4-PENTADIENE	68.00		7.479E+02	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
592132	2,5-DIMETHYLHEXANE	114.00		3.030E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
592278	2-METHYLHEPTANE	114.00	SRC	2.070E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
59231344	isododecylolate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
592416	1-HEXENE	84.00		1.860E+02	RIDDICK,JA E	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
592574	1,3-CYCLOHEXADIENE	80.00		9.727E+01	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
592767	1-HEPTENE	98.00	SRC	5.930E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
592847	N-BUTYLFORMATE	102.00	SRC	2.890E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
59303	FOLIC ACID	441.00	SRC	0.000E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
593453	OCTADECANE	255.00		3.413E-04	PERRY,RH & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
598630	lead carbonate, basic					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
5989275	D-LIMONENE	136.00	SRC	1.980E+00	YAWS,CL (199	0	0.00100	0.00100	0.00100	1.30E-01	2.83E-02	4.50E-02	1.00E+00	9.99E-01	5.74E-02	T
60004	ETHYLENEDIAMINETETRAACETIC ACID	292.00	SRC	0.000E+00	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
60128	2-PHENYLETHANOL	122.00	SRC	8.680E-02	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
60297	DIETHYL ETHER	74.00	SRC	5.371E+02	BOUBLIK,T ET	0	0.10000	0.10000	0.10000	1.22E-01	1.62E-02	3.26E-02	8.18E-01	5.74E-01	4.76E-02	T
60355	ACETAMIDE	59.00	EFDB	1.090E+00	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
60515	DIMETHOATE	229.00	EFDB	8.250E-06	HOWARD, P.H.	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
60676860	amorphous silica					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6069983	1-methyl-4-isopropylencyclohexane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
60842322	Aerosil R-972/fumed silica					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
60864337	Triton CF-10					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
611143	1-ETHYL-2-METHYLBENZENE	120.00	SRC	2.610E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61116083	specially denatured alcohol no. 40					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6132043	sodium citrate dihydrate	294.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
614186	NICOTINIC ACID, ETHYL ESTER	151.00	SRC	8.400E-02	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
616397	DMEA					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
617787	3-ETHYLPENTANE	100.00		5.790E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61788474	coconut fatty acid					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
61788485	acetylated lanolin					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61788496	acetylated lanolin alcohol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
61788850	PEG-25 hydrogenated castor oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61788850	PEG-40 hydrogenated castor oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61789002	ethylene propylene rubber					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61789193	amine condensate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
61789320	sodium cocoyl isethionate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61789400	cocoamidopropyl betaine					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
61789513	cobalt naphthenate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61789773	Quaternium-34					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61789808	Quaternium-18					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
61789911	Jojoba oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61790145	lead naphthenate	1579.00	HCDR			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61790532	Celite 499					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61790532	celite diatomaceous earth					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61790816	PEG-60 lanolin					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61790816	PEG-40 lanolin					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61790816	ethoxylated lanolin					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61790816	Ethoxylan 100					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61791126	Surfactol 365					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61791137	Coceth-6					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61791206	Laneth-5					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61791206	Laneth-25					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
61791206	Laneth-16					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61791295	polyethylene glycol 400 monooleate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61791477	dihydroxyethyl cocamine oxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
61849727	methyl glucose sesquistearate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
620144	M-ETHYLTOLUENE	120.00		3.040E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
62108263	2,6,8-trimethyldecane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
62199626	pentamethylheptane					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
62231607	Polmekon SPP-W					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
62237994	2,2,7-trimethyldecane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
622968	P-ETHYLTOLUENE	120.00	SRC	3.000E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6231607	refined microcrystalline wax					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
62384	PHENYLMERCURIC ACETATE	337.00	SRC	6.000E-06	SRC	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
624544	AMYL PROPIONATE	144.00		3.600E+00	HINE,J & MOO	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
624726	1,2-DIFLUOROETHANE	66.00	EFDB	6.162E+02	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
62534490	Cyplex 1600 Resin					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
62637938	2,2,4 tmo	111.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
626937	2-HEXANOL	102.00		2.488E+00	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
627190	1-PENTYNE	68.00		4.360E+02	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
62737	DICHLORVOS	221.00	EFDB	5.300E-02	KIM,YH ET AL	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
627838	ethylene glycol distearate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
627930	HEXANEDIOIC ACID, DIMETHYL ESTER	174.00	ALD	6.038E-02	VLASOV,ON &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
628295	2-THIAHEXANE	104.00	SRC	1.560E+01	BOUBLIK,T ET	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
628411	1,4-CYCLOHEXADIENE	80.00		6.661E+01	CHAO,J ET AL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
628637	N-AMYL ACETATE	130.00	SRC	3.500E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	5.74E-02	5.47E-03	1.23E-02	3.52E-01	1.95E-01	1.97E-02	T
629141	1,2-DIETHOXYETHANE	118.00	ALD	3.373E+01	HINE,J & MOO	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
629209	1,3,5,7-CYCLOOCTATETRAENE	104.00		7.800E+00	BOUBLIK,T ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
629505	N-TRIDECANE	184.00	SRC	5.580E-02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
629594	TETRADECANE	198.00	SRC	1.160E-02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
629629	N-PENTADECANE	212.00	SRC	3.430E-03	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
629787	HEPTADECANE	240.00	SRC	2.280E-04	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
629925	NONADECANE	269.00		4.903E-05	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
629970	DOCOSANE	311.00		5.452E-08	ZWOLINSKI,BJ	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
630206	1,1,1,2-TETRACHLOROETHANE	168.00		1.200E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6305711	2,4-DIMETHYL-1-PENTANOL	116.00	SRC	1.040E+00	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63148538	BKY-301					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63148629	dimethylsilicone					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63148674	Thiokol LP-3 Elastomer					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63172792	Polywet ND-2					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63231607	microcrystalline wax					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63252	1-NAPHTHYL-N-METHYLCARBAMATE	201.00	EFDB	1.360E-06	HOWARD, P.H.	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63335886	dimethyloctane					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63393931	isopropyl lanolate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63449398	chlorinated paraffin					0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
635392	guanine hydrochloric acid					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6358856	C.I. PIGMENT YELLOW 12	630.00				0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63716405	1-butoxy-2-propanol					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63793602	PPG-3 Isosteareth-9					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63793602	PPG-3 Myristyl Ether					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
63799531	propylene glycol isosteareate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
638040	1,3-DIMETHYLCYCLOHEXANE (CIS)	112.00		2.150E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64028	EDTA, SODIUM SALT	380.00	SRC	1.000E-12	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
64028	cheelox bf-78	380.00	SRC	2.400E+01	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6410293	C.I. Pigment Red 32					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64156203	Quaternium-26					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
64175	ETHANOL	46.00	SRC	5.926E+01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	7.35E-02	6.47E-03	1.50E-02	3.85E-01	2.16E-01	2.46E-02	T
64186	FORMIC ACID	46.00	SRC	4.259E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	4.88E-04	3.26E-05	8.14E-05	2.16E-03	1.08E-03	1.43E-04	T
64197	ACETIC ACID	60.00	SRC	1.573E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	3.82E-07	2.55E-08	6.37E-08	1.69E-06	8.46E-07	1.12E-07	T
64265572	CX-100					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64365237	dimethicone copolyol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6440580	Hydantoin DMDM					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64475850	MINERAL SPIRITS			2.530E+00	CUSTANCE,SR	0	0.00099	0.00099	0.00099	1.37E-01	2.53E-02	4.39E-02	9.93E-01	9.19E-01	5.86E-02	T
646071	4-METHYLPENTANOIC ACID	116.00	SRC	4.450E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64706269	isopropylan					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64741522	distillates (petroleum)					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64741599	petroleum distillates/products					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64741657	64741-65-7					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64741668	Isopar C Exxon					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64741873	light aromatic solvent naphtha p					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64741887	ts-28b, shell solvent					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64742478	2251 oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64742536	hydrotreated light naphthenic di					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64742887	floor sweep blend					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64742898	light aliphatic petroleum naphth					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64742934	asphalt					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64742945	heavy aromatic naphtha					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
64742956	ts-28b, shell solvent					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6484522	ammonium nitrate					0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
65071989	Laneth-10 acetate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
66228	URACIL	112.00	SRC	2.770E-06	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
66251	HEXANAL	100.00	SRC	1.126E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
66717	O-PHENANTHROLINE	180.00	SRC	5.230E-05	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
67038	vitamin B1/B2					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
672651	(1-CHLOROETHYL)BENZENE	141.00		9.150E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6728263	(E)-2-HEXENAL	98.00	SRC	6.600E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
673325	1-phenyl-1-propyne					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
67561	METHANOL	32.00	SRC	1.270E+02	BOUBLIK,T ET	0	0.00100	0.00100	0.00100	2.28E-03	1.53E-04	3.82E-04	1.01E-02	5.08E-03	6.71E-04	T
67630	ISOPROPANOL	60.00	SRC	4.542E+01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	6.76E-02	6.01E-03	1.39E-02	3.65E-01	2.04E-01	2.26E-02	T
67641	ACETONE	58.00	SRC	2.315E+02	BOUBLIK,T ET	0	0.10000	0.10000	0.10000	7.26E-02	6.58E-03	1.51E-02	3.96E-01	2.23E-01	2.45E-02	T
67663	CHLOROFORM	119.00	EFDB	1.970E+02	BOUBLIK,T ET	0	100.00000	100.00000	100.00000	1.22E-01	2.12E-02	3.79E-02	9.72E-01	8.35E-01	5.13E-02	T
67685	DIMETHYL SULFOXIDE	78.00	EFDB	6.100E-01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
67721	HEXACHLOROETHANE	237.00	HCDR	2.100E-01	ARCHER,WL (1	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
67762907	dimethyl siloxane					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
68042	sodium citrate	258.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
68111	MERCAPTOACETIC ACID	92.00	SRC	8.680E-02	PERRY,RH & G	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
68122	N,N-DIMETHYLFORMAMIDE	73.00	EFDB	3.870E+00	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
68131395	c12-c15 ethoxylated alcohol					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
68154972	alcohols,c10-c12, ethoxylated, p					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6818454	alpha olefin sulfonate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
682019	tetrapropyl orthosilicate	264.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
68268	vitamin A					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6834920	SODIUM METASILICATE	122.00	SRC			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
68410979	distillates (petroleum) hydrotre					0	0.00099	0.00099	0.00099	1.50E-01	3.31E-02	5.25E-02	1.00E+00	1.00E+00	6.68E-02	T

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBLRATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
68412544	alkylphenol ethoxylate					0	0.00099	0.00099	0.00099	1.54E-03	1.04E-04	2.58E-04	6.87E-03	3.44E-03	4.54E-04	T
68476857	liquefied petroleum gas					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
68608344	citrus terpenes					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6876239	1,2-DIMETHYLCYCLOHEXANE (TRANS)	112.00	SRC	1.937E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
68782246	coconut oil soap mixture					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
68784247	alkylphenol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
68814879	straight run middle petroleum					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
68855549	de					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
68916392	witch hazel distillate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
68917679	turpentine					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
689569	terpenes					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
691372	4-METHYL-1-PENTENE	84.00		2.716E+02	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6915180	2-butenedioic acid					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6935655	BENZAMIDE, N,N,3-TRIMETHYL-	163.00		1.100E-01	SURYANARAYAN	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6938949	diisopropyl adipate					0	0.00100	0.00100	0.00100	7.07E-02	9.07E-03	1.83E-02	6.09E-01	3.75E-01	2.69E-02	T
69430246	dimethyl cylosilozane					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
696297	ISOPROPYLCYCLOHEXANE	126.00	SRC	4.797E+00	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
69727	SALICYLIC ACID	138.00	SRC	8.200E-05	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
6975980	2-METHYLDECANE	156.00	SRC	6.020E-01	BOUBLIK,T ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7005472	2-dimethylamino-2-methyl-1-propanol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
70657704	2-methoxy-1-propanol acetate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7085850	2-cyano-2-propenoic acid ethyl e					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7094260	1,1,2-trimethylcyclohexane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
710043	undecalactone					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
71238	1-PROPANOL	60.00	SRC	2.099E+01	RIDDICK,JA E	0	100.00000	100.00000	100.00000	6.76E-02	6.01E-03	1.39E-02	3.65E-01	2.04E-01	2.26E-02	T
71363	1-BUTANOL	74.00	SRC	6.700E+00	BOUBLIK,T ET	0	0.10000	0.10000	0.10000	1.89E-03	1.27E-04	3.18E-04	8.44E-03	4.23E-03	5.58E-04	T
71410	1-PENTANOL	88.00	SRC	2.200E+00	RIDDICK,JA E	0	0.10000	0.10000	0.10000	3.86E-03	2.62E-04	6.51E-04	1.73E-02	8.70E-03	1.14E-03	T
71432	BENZENE	78.00	EFDB	9.520E+01	BOUBLIK,T ET	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7146603	2,3-dimethyloctane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7154805	3,3,5-trimethylheptane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
71556	methyl chloroform	133.00	HSDB	1.238E+02	HSDB	0	0.10000	0.10000	0.10000	1.29E-01	2.75E-02	4.43E-02	1.00E+00	9.95E-01	5.69E-02	T
71556	1,1,1-TRICHLOROETHANE	133.00	SRC	1.240E+02	BOUBLIK,T ET	0	0.10000	0.10000	0.10000	1.29E-01	2.75E-02	4.43E-02	1.00E+00	9.95E-01	5.69E-02	T
7173515	Bardac 22 (quaternary ammonium compound)					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
72173	sodium lactate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
72269308	alkyl acetate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
72435	METHOXYCHLOR	346.00	ALD	2.580E-06	HOWARD, P.H.	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
73003802	2,2-dibromomalonamide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7311275	Nonoxynol-4					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7320345	tetrapotassium pyrophosphate	330.00	Chemfinder			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
73405	GUANINE	151.00	SRC	9.600E-11	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
741582	BENSULIDE	217.00		8.000E-07	WAUCHOPE,RD	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7429905	aluminum powder					0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7440484	COBALT	61.00	SRC			0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7440508	COPPER	64.00	SRC			0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7440677	zirconium drier	91.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7447407	potassium chloride	75.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
74839	METHYL BROMIDE	95.00	ALD	1.616E+03	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
74840	ETHANE	30.00		3.152E+04	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
74851	ETHYLENE	28.00	ALD	5.213E+04	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
74986	PROPANE	44.00	SRC	7.152E+03	DAUBERT,TE &	0	0.00100	0.00100	0.00100	2.17E-01	4.93E-02	7.78E-02	1.00E+00	1.00E+00	9.88E-02	T
75003	CHLOROETHANE	65.00		1.008E+03	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F



Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
75070	ACETALDEHYDE	44.00	SRC	9.020E+02	BOUBLIK,T ET	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75092	DICHLOROMETHANE	85.00	SRC	4.350E+02	BOUBLIK,T ET	0	0.10000	0.10000	0.10000	1.42E-01	2.46E-02	4.41E-02	9.83E-01	8.69E-01	5.98E-02	T
75150	CARBON DISULFIDE	76.00	SRC	3.580E+02	BOUBLIK,T ET	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75194	CYCLOPROPANE	42.00		5.414E+03	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75218	ETHYLENE OXIDE	44.00		1.314E+03	DAUBERT,TE &	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75218	ethylene oxide	44.00		1.314E+03	DAUBERT,TE &	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75274	BROMODICHLOROMETHANE	164.00	SRC	5.000E+01	CALLAHAN,MA	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75285	2-METHYLPROPANE	58.00	SRC	2.611E+03	RIDDICK,JA E	0	0.00100	0.00100	0.00100	1.92E-01	4.31E-02	6.82E-02	1.00E+00	1.00E+00	8.67E-02	T
75310	ISOPROPYLAMINE	59.00	ALD	5.796E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75343	1,1-DICHLOROETHANE	99.00	SRC	2.273E+02	DAUBERT,TE &	0	0.10000	0.10000	0.10000	1.39E-01	2.59E-02	4.47E-02	9.95E-01	9.30E-01	5.94E-02	T
75354	1,1-DICHLOROETHENE	97.00		6.000E+02	BOUBLIK,T ET	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75365	ACETYLCHLORIDE	79.00		2.870E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75376	1,1-DIFLUOROETHANE	66.00	EFDB	4.550E+03	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75434	DICHLOROFLUOROMETHANE	103.00		1.362E+03	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75456	chlorodifluoromethane	87.00	EFDB	7.252E+03	PERRY,RH & G	0	0.10000	0.10000	0.10000	1.58E-01	3.36E-02	5.43E-02	1.00E+00	9.98E-01	6.98E-02	T
75525	NITROMETHANE	61.00	SRC	3.584E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75569	PROPYLENE OXIDE	58.00	SRC	5.380E+02	BOUBLIK,T ET	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7558794	disodium phosphate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
7558807	PHOSPHORIC ACID, MONOSODIUM SALT	120.00	SRC			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75650	T-BUTANOL	74.00	SRC	4.170E+01	BOUBLIK,T ET	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75659	Propellant 11					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75683	1-CHLORO-1,1-DIFLUOROETHANE	101.00		2.544E+03	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75694	TRICHLOROFLUOROMETHANE	137.00	SRC	8.028E+02	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75718	DICHLORODIFLUOROMETHANE	121.00	EFDB	4.848E+03	DAUBERT,TE &	0	0.00100	0.00100	0.00100	1.37E-01	2.99E-02	4.76E-02	1.00E+00	9.99E-01	6.07E-02	T
75832	2,2-DIMETHYLBUTANE	86.00	SRC	3.193E+02	BOUBLIK,T ET	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75854	2-METHYL-2-BUTANOL	88.00	ALD	1.680E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
75898	2,2,2-TRIFLUOROETHANOL	100.00		7.127E+01	MEEKS,AC & G	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7601549	TRISODIUM PHOSPHATE	164.00	SRC			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
76062	TRICHLORONITROMETHANE	164.00	EFDB	2.380E+01	MARTIN,H & W	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
76120	1,1,2,2-TETRACHLORODIFLUOROETHANE	204.00	SRC	6.600E+01	HOWARD,P.H.	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
76131	1,1,2-TRICHLOROTRIFLUOROETHANE	187.00	EFDB	3.625E+02	BOUBLIK,T ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
76142	1,2-DICHLOROTETRAFLUOROETHANE	171.00	SRC	2.014E+03	RIDDICK,JA E	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7620771	12-hydroxy-octadecanoic monolith					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
76222	CAMPHOR	152.00	SRC	6.500E-01	JONES,AH (19	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7631869	silicone dioxide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
7631869	diatomaceous silica					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7631905	sodium bisulfite					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7631950	sodium molybdate	206.00	ALD			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7632000	sodium nitrite					0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7632044	sodium perborate	82.00	Chemfinder			0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
763291	2-METHYL-1-PENTENE	84.00		1.950E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
763699	ethyl 3-ethoxy propionate	146.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
76380	METHOXYFLURANE	165.00	HCDR	4.910E+01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7647010	HYDROCHLORIC ACID	36.00	SRC	3.540E+04	DAUBERT,TE &	0	0.10000	0.10000	0.10000	1.54E-01	1.92E-02	3.97E-02	8.41E-01	6.02E-01	5.92E-02	T
7647145	SODIUM CHLORIDE	58.00	SRC	7.400E-06	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
765037	dodecyne					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7651027	stearamidopropyl dimethylamine					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7664382	PHOSPHORIC ACID	98.00	ALD			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
7664393	HYDROGEN FLUORIDE	20.00		9.172E+02	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7664417	AMMONIA	17.00		7.508E+03	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7664939	SULFURIC ACID	98.00	ALD	5.933E-05	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
767588	2,3-dihydro-1-methylindene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7681529	sodium hypochlorite					0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
768490	(2-METHYL-1-PROPENYL)BENZENE	132.00		5.510E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7697372	NITRIC ACID	63.00	ALD	6.306E+01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7704349	SULFUR	34.00	SRC			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7705148	DIPENTENE (+-)	136.00		2.000E+01	RIDDICK,JA E	0	0.00099	0.00099	0.00099	1.19E-01	2.18E-02	3.78E-02	9.87E-01	8.86E-01	5.05E-02	T
7722841	HYDROGEN PEROXIDE	34.00	Chemfinder	1.970E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	7.36E-06	4.91E-07	1.23E-06	3.26E-05	1.63E-05	2.16E-06	T
7722885	TETRASODIUM PYROPHOSPHATE	266.00	SRC			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
7727437	barium sulfate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7732185	WATER	18.00	Chemfinder	2.379E+01	DAUBERT,TE &	0	0.00000	0.00000	0.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
7757826	sodium sulfate	142.00	Chemfinder			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
7758192	sodium chlorite	90.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7758294	sodium tripolyphosphate	368.00	ALD			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
7758976	lead chromate	323.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
77689	2,2,4-trimethyl-1,3-pentanediolisobutya					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
77736	DICYCLOPENTADIENE	132.00		2.294E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7775099	SODIUM CHLORATE	106.00	ALD			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7775384	phenylethyl formate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7778532	tripotassium phosphate	212.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
7779273	hexahydro-1,3,5-triethyl-s-triazine					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7783202	steol	132.00	HCDR			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7783280	diammonium phosphate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
7789062	strontium chromate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
77929	CITRIC ACID	192.00	EFDB	3.700E-09	NEELY,WB & B	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
7803625	silane compounds					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
78206685	adfs					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
78400	TRIETHYL PHOSPHATE	182.00		3.930E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
78513	TRI-2-BUTOXYETHYL PHOSPHATE	398.00	SRC	2.500E-08	HL X WSOL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
78591	ISOPHORONE	138.00	ALD	4.000E-01	PERRY,RH & G	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
78693	3,7-dimethyl-3-octanol					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
78706	LINALOOL	154.00	SRC	1.600E-01	LI,NY & PERD	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
78784	ISOPENTANE	72.00	SRC	6.890E+02	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
78795	2-METHYL-1,3-BUTADIENE	68.00		5.510E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
78831	ISOBUTYL ALCOHOL	74.00	SRC	1.045E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
78842	ISOBUTYRALDEHYDE	72.00	SRC	1.730E+02	BOUBLIK,T ET	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
78922	2-BUTANOL	74.00	EFDB	1.833E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
78933	2-BUTANONE	72.00	SRC	9.530E+01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	1.50E-02	1.06E-03	2.61E-03	6.97E-02	3.55E-02	4.53E-03	T
78966	1-AMINO-2-PROPANOL	75.00	EFDB	4.700E-01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
79005	1,1,2-TRICHLOROETHANE	133.00	SRC	2.300E+01	ENGINEERING	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
79016	TRICHLOROETHENE	131.00	SRC	6.900E+01	BOUBLIK,T ET	0	0.10000	0.10000	0.10000	1.26E-01	2.48E-02	4.15E-02	9.98E-01	9.60E-01	5.43E-02	T
79094	propionic acid	74.00		3.530E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
79107	ACRYLIC ACID	72.00	EFDB	4.000E+00	DAUBERT,TE &	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
79141	HYDROXYACETIC ACID	76.00	SRC	2.000E-02	DAUBERT,TE &	0	100.00000	100.00000	100.00000	2.71E-03	1.83E-04	4.55E-04	1.21E-02	6.07E-03	7.99E-04	T
79163	N-METHYLACETAMIDE	73.00	SRC	4.400E-01	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
79209	METHYL ACETATE	74.00	SRC	2.162E+02	AMBROSE,D ET	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
79210	PEROXYACETIC ACID	76.00	ALD	1.446E+01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
79243	NITROETHANE	75.00	ALD	2.084E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
79298	2,3-DIMETHYLBUTANE	86.00		2.350E+02	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
79414	METHACRYLIC ACID	86.00	ALD	9.750E-01	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
79469	2-NITROPROPANE	89.00	EFDB	1.721E+01	DAUBERT,TE &	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
79925	CAMPHENE	136.00	SRC	2.505E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
8000280	oil lavender					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8000348	clove oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8000417	TERPINEOL	154.00	SRC	3.070E-02	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8000484	eucalyptus oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8001227	soybean oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8001261	linseed oil					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
8001294	cottonseed oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8001307	corn oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8001318	coconut oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8001396	Japan Wax					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8001545	benzalkonium chloride					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
8001589	creosote					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8001783	Thixcin R					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8001794	castor oil					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8001976	Aloe					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8002059	petroleum disillate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8002093	pine oil					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
8002264	tall oil fatty acid					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8002311	cocoa butter					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8002333	sulfonated castor oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8002435	lecithin					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8002742	paraffin					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8003347	pyrethrins					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8005025	Special Black 4/carbon black					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8006391	alpha terpineol	154.00	HCDR			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8006448	Candelilla Wax					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8006540	lanolin					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8007430	sorbitol sesquioleate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8007430	sorbitan sesquioleate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8007452	coal tar solution					0	100.00000	100.00000	100.00000	1.43E-01	2.87E-02	4.78E-02	1.00E+00	9.79E-01	6.24E-02	T
8008206	KEROSENE			4.800E-01	USEPA (1989A)	0	100.00000	100.00000	100.00000	1.32E-01	1.49E-02	3.19E-02	7.32E-01	4.83E-01	4.87E-02	T
8008513	oil camphor					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8008568	lemon oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8008579	orange oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8008579	orange blossom perfume					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8008740	sesame oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
8009038	petrolatum					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8012893	synthetic beeswax					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8012951	white mineral oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8013078	Paraplex G-60					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8015869	Carmauba					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
80159	CUMENE HYDROPEROXIDE	152.00	EFDB	1.500E-02	SHEPPARD,CJ	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8020835	mineral oil					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
8023743	Mink Oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8024326	avocado oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
8027336	lanolin alcohol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8027632	Ceralan					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8030306	NAPHTHA			3.192E+01	SINGH,HB ET	0	0.00100	0.00100	0.00100	1.50E-01	3.30E-02	5.24E-02	1.00E+00	1.00E+00	6.68E-02	T
8030760	soybean lecithin					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8030782	tallowtrimonium chloride					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8031445	hydrogenated lanolin					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
8032324	LIGROIN			5.000E+01	USEPA (1989A)	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8050155	Hercolyn D					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8050315	ester gum					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8051307	coconut oil diethanolamine					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
8052413	stoddard solvent					0	0.00100	0.00100	0.00100	1.50E-01	3.30E-02	5.24E-02	1.00E+00	1.00E+00	6.68E-02	T
80568	ALPHA-PINENE	136.00	SRC	4.750E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	1.29E-01	2.80E-02	4.47E-02	1.00E+00	9.98E-01	5.71E-02	T
8057656	Arnica					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8061516	polyfon h					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
80626	METHYL METHACRYLATE	100.00		3.840E+01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
81130	panthenol	205.00	HCDR			0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
81295354	saci					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
81889	RHODAMINE B	480.00		0.000E+00	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
821078	TRANS-1,3,5-HEXATRIENE	80.00		1.150E+02	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
821954	1-UNDECENE	154.00	SRC	4.931E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
822060	HEXAMETHYLENE DIISOCYANATE	168.00	ALD	3.000E-02	GOLDBERG,NA	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
8221612	sodium stearate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
824226	2,3-dihydro-4-methylindene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
82688	PENTACHLORONITROBENZENE	295.00	ALD	5.000E-05	GILE,JD & GI	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
82829	acenaphthene	154.00	EFDB	3.000E-03	EFDB	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
83329	ACENAPHTHENE	154.00	EFDB	2.500E-03	BOYD,RH ET A	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
83727	1,4-NAPHOQUINONE, 2-HYDROXY	174.00	SRC	3.630E-07	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
84742	DIBUTYL PHTHALATE	278.00	EFDB	7.300E-05	HOWARD,PH ET	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
85449	PHTHALIC ANHYDRIDE	148.00	ALD	5.170E-04	JONES,AH (19	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
85687	BUTYL BENZYL PHTHALATE	312.00	EFDB	8.250E-06	HOWARD,PH (1	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
868779	2-HYDROXYETHYL METHACRYLATE	130.00	ALD	7.910E-02	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
871830	2-METHYLNONANE	142.00	SRC	1.886E+00	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
872059	1-DECENE	140.00		1.670E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
872504	N-METHYLPYRROLIDONE	99.00	SRC	3.415E-01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	1.32E-05	8.82E-07	2.21E-06	5.86E-05	2.93E-05	3.88E-06	T
872504	n-methyl-2-pyrrolidone	99.00	SRC	3.415E-01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	1.32E-05	8.82E-07	2.21E-06	5.86E-05	2.93E-05	3.88E-06	T
873494	CYCLOPROPYLBENZENE	118.00		1.320E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
874419	1,3-DIMETHYL-4-ETHYLBENZENE	134.00		8.541E-01	CHAO,J ET AL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
87445	caryophyllene					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
87898	INOSITOL	180.00	SRC	2.050E-09	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
88040	4-CHLORO-3,5-DIMETHYL PHENOL	157.00	SRC	1.070E-02	NEELY,WB & B	0	0.00099	0.00099	0.00099	2.62E-04	1.75E-05	4.38E-05	1.16E-03	5.82E-04	7.70E-05	T
88120	N-VINYL-2-PYRROLIDINONE	111.00	ALD	1.140E-01	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
88186	O-T-BUTYLPHENOL	150.00	SRC	1.500E-04	SHIU,WY ET A	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
88722	2-NITROTOLUENE	137.00	ALD	1.882E-01	PERRY,RH & G	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
89827	pulegone					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9000071	carrageenan					0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9000117	carboxymethylcellulose ether					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9000162	damar					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9000300	guar-hydroxypropyl trimonium chloride					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9000719	casein					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9002840	polytetra fluoroethylene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9002884	polyethylene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9002920	poly(oxyethylene) lauryl ether	363.00	Chemfinder			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9002931	Triton X-100					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9003047	poly(acrylic acid) sodium salt					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9003194	vinyl ether polymer					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9003207	vinyl acetate resin					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9003274	isobutene polymer					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
9003285	polybutene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9003398	vinylpyrrolidone polymer					0	0.00100	0.00100	0.00100	6.74E-02	6.70E-03	1.49E-02	4.20E-01	2.39E-01	2.36E-02	T
9003398	PVP-K30					0	0.00100	0.00100	0.00100	6.74E-02	6.70E-03	1.49E-02	4.20E-01	2.39E-01	2.36E-02	T
9003398	polyvinylpyrrolidone/VA copolymer					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004391	cellulose acetate propionate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004539	dextrin					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004584	ethylhydroxyethylcellulose (in toluene)					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004620	hydroxyethyl cellulose					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9004642	hydroxypropyl cellulose					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004653	hydroxypropyl methylcellulose					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004700	nitrocellulose	504.00	HCDR			0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004824	sodium lauryl ether sulfate					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9004959	polyoxyethylene cetyl ether					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004960	PEG-200 glyceryl monostearate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004982	polyoxyethylene (20) oleyl ether					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004982	Oleth-10					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004993	PEG-8 distearate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004993	PEG-40 sorbitan diisostearate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9004993	PEG 1000 monostearate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9005009	Stearth-20					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9005009	Stearth-2					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9005087	PEG 6000 Distearate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9005087	PEG-150 distearate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9005123	phenyl dimethicone					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9005258	corn starch					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9005429	ammoniated casein					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9005645	Polysorbate 20					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9005656	Tween 80					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9005667	Polysorbate 40					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9005678	polyoxyethylene sorbitan monooleate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9005703	Polysorbate 85					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9006659	dimethicone					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9007163	Carbomer 934					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9007583	hydrolyzed animal protein/elasticin					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9009545	polyurethane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9010417	Triton X-200					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9010439	octoxynol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9010440	Triton X-155					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9010779	ethylene acrylic acid co-polymer					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9010859	butyl rubber					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9011147	polymethyl methacrylate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
90120	1-METHYLNAPHTHALENE	142.00	SRC	6.700E-02	MACKNICK,AB	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9012720	polyglucane					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9014931	Igepal DM-530					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9016006	POLY(DIMETHYLSILOXANE)	74.00				0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9016459	SURFONIC N-95					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	SURFONIC N-85					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	nonylphenoxy poly(ethyleneoxy) ethanol					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	Tergitol NP-10					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	SURFONIC N-60					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	Igepal CO-610					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBLRATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
9016459	SURFONIC N-120					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	SURFONIC N-150					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	SURFONIC N-40					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	Triton N-57					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	Arkopal N-040					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	ethoxylated nonylphenol					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	Triton N-101					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	nonylphenol ethoxylate					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	Igepal CO-897					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9016459	SURFONIC N-200					0	0.00100	0.00100	0.00100	7.25E-07	4.84E-08	1.21E-07	3.21E-06	1.61E-06	2.13E-07	T
9036195	ethoxylated octylphenol					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9036195	Igepal CO-630					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9036195	Octoxynol-9					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9036195	IGEPAL CA-630					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9036195	Triton X-207					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9036195	Triton X-114					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9036195	Triton X-15					0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	T
9038953	PPG-12-Buteth-16					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9042766	Quaternium-6					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
90437	2-PHENYLPHENOL	170.00	SRC	2.000E-03	KUNDEL,H ET	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9051574	ALIPAL CO-436					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9061874	Nopcosant L					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9062048	Carbomer 941					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9063518	Tamol 850					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
90722	tri(dimethylaminomethyl)phenol					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9080799	polystyrene sulfonate, sodium salt					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
9084064	TAMOL SN dispersant					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
91087	TOLUENE-2,6-DIISOCYANATE	174.00	SRC	9.110E-02	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
91178	DECAHYDRONAPHTHALENE	138.00	EFDB	2.300E+00	BOUBLIK,T ET	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
91203	NAPHTHALENE	128.00	SRC	8.500E-02	AMBROSE,D ET	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
915673	AMARANTH	604.00		0.000E+00	NEELY,WB & B	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
91576	2-METHYLNAPHTHALENE	142.00	SRC	5.500E-02	KARYAKIN,NV	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
919302	(3-aminopropyl)triethoxysilane	221.00	ALD			0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
921471	2,3,4-TRIMETHYLHEXANE	128.00		9.020E+00	ZWOLINSKI,BJ	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
92524	BIPHENYL	154.00	SRC	8.930E-03	BURKHARD,LP	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
92831	9H-XANTHENE	182.00	SRC	8.470E-04	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
929066	diethylene glycolamine	105.00	ALD			0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
931179	1,2-CYCLOHEXANEDIOL	116.00		1.050E-02	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
931646	BICYCLO(2.2.2)OCT-2-ENE	108.00		9.930E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
934805	4-ETHYL-1,2-DIMETHYLBENZENE	134.00		7.482E-01	YAWS,CL (199	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
93583	BENZOIC ACID, METHYL ESTER	136.00	ALD	3.800E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
93652	MECOPROP	215.00	HCDR	7.500E-07	HARTLEY,D &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
93805	4-ethyl-1,2-dimethylbenzene					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
93823	Stearamide DEA					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
93925	phenyl ethyl acetate					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
94097	P-AMINO BENZOIC ACID, ETHYL ESTER	165.00	HCDR	6.590E-02	OHE,S (1976)	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
94133	P-HYDROXY PROPYL BENZOATE	180.00	SRC	5.550E-04	NEELY,WB & B	0	0.00100	0.00100	0.00100	1.15E-03	7.71E-05	1.92E-04	5.12E-03	2.56E-03	3.38E-04	T
94268	P-HYDROXY BUTYL BENZOATE	194.00	SRC	1.860E-04	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
94360	BENZOYL PEROXIDE	242.00	EFDB	4.230E-04	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
94597	SAFROLE	162.00	ALD	6.180E-02	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
94757	2,4-DICHLOROPHENOXYACETIC ACID	221.00	EFDB	6.000E-07	HOWARD, P.H.	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

Appendix C  
Chemical File

CAS_NUM	CHEM_NAME	MOLEC_WGT	MOLEC_REF	VAPOR_PRSS	VAPOR_REF	REACT_RATE	ACUTE_RATE	CHRON_RATE	COMBL_RATE	VOL_FRC1	VOL_FRC2	VOL_FRC3	VOL_FRC4	VOL_FRC5	VOL_FRC6	CASE2_CHM
95136	INDENE	116.00		1.100E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
95147	1H-BENZOTRIAZOLE	119.00	EFDB	4.000E-02	DAVIS,LN ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
95476	O-XYLENE	106.00	SRC	6.610E+00	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
95487	O-CRESOL	108.00	EFDB	2.990E-01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	3.41E-04	2.28E-05	5.69E-05	1.51E-03	7.56E-04	1.00E-04	T
95498	2-CHLOROTOLUENE	127.00	EFDB	3.430E+00	DAUBERT,TE &	0	0.10000	0.10000	0.10000	1.18E-01	2.00E-02	3.60E-02	9.61E-01	8.03E-01	4.90E-02	T
95501	1,2-DICHLOROBENZENE	147.00	SRC	1.360E+00	DAUBERT,TE &	0	0.10000	0.10000	0.10000	9.35E-02	1.29E-02	2.54E-02	7.65E-01	5.16E-01	3.66E-02	T
95636	1,2,4-TRIMETHYLBENZENE	120.00	EFDB	2.100E+00	CHAO,J ET AL	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
95932	1,2,4,5-TETRAMETHYLBENZENE	134.00	SRC	5.283E-01	CHAO,J ET AL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
96128	1,2-DIBROMO-3-CHLOROPROPANE	236.00		5.800E-01	MUNNECKE,DE	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
96140	3-METHYLPENTANE	86.00	SRC	1.900E+02	RIDDICK,JA E	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
96231	1,3-DICHLORO-2-PROPANOL	129.00	SRC	7.500E-01	WEBER,RC ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
96264	DIHYDROXY ACETONE	90.00	EFDB	2.080E-02	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
96297	2-BUTANONE OXIME	87.00	SRC	9.040E-01	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
96377	METHYLCYCLOPENTANE	84.00	SRC	1.375E+02	BOUBLIK,T ET	0	0.00100	0.00100	0.00100	1.62E-01	3.58E-02	5.69E-02	1.00E+00	1.00E+00	7.25E-02	T
96480	GAMMA-BUTYROLACTONE	86.00	SRC	4.500E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
97303	PPG-20 methyl glucose ether					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
97530	EUGENOL	164.00	SRC	2.262E-02	PERRY,RH & G	0	100.00000	100.00000	100.00000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
97596	ALLANTOIN	158.00	SRC	4.320E-09	NEELY,WB & B	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
97621	ETHYL ISOBUTYRATE	116.00		2.540E+01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
97632	ETHYL METHACRYLATE	114.00	SRC	2.059E+01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
97778	DISULFIRAM	297.00		8.700E-04	WSOL X HL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
97858	ISOBUTYL ISOBUTYRATE	144.00	SRC	4.330E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
97869	METHACRYLIC ACID, I-BUTYL ESTER	142.00	ALD	4.110E+00	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
97950	2-ETHYL-1-BUTANOL	102.00	SRC	1.530E+00	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
97994	TETRAHYDROFURFURYL ALCOHOL	102.00	ALD	8.010E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
98000	2-HYDROXYMETHYLFURAN	98.00	ALD	6.090E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
98511	P-(T-BUTYL)TOLUENE	148.00	SRC	6.710E-01	DREISBACH,RR	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
98533	4-tert-butylcyclohexanone					0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
98544	P-T-BUTYLPHENOL	150.00	SRC	3.807E-02	CHAO,J ET AL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
98828	CUMENE	120.00	SRC	4.500E+00	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
98839	ALPHA-METHYLSTYRENE	118.00	SRC	2.900E-01	BOUBLIK,T ET	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
98862	ACETOPHENONE	120.00	EFDB	3.970E-01	DAUBERT,TE &	0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
98920	NICOTINAMIDE	122.00	ALD	4.200E-04	NEELY,WB & B	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989903319	petroleum hydrocarbon					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989903363	phenolic resin					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989903706	resin					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989915934	dye					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989921248	alkanoamide					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989922746	additives					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989927461	lubrizol product 1095					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989933625	oxygenated hydrocarbon corrosion					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989941722	triethylene glycol monoalkyl eth					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989944874	anti oxidant					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989949919	diphenylmethane diisocyanate (md					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989972127	diluent oil					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
989972139	armor all concentrate					0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
993077	trimethylsilane					0	0.10000	0.10000	0.10000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
99627	1,3-DIISOPROPYLBENZENE	162.00	SRC	3.930E-01	DAUBERT,TE &	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
99763	4-HYDROXY METHYL BENZOATE	152.00	SRC	7.000E-02	US EPA (1989	0	0.00100	0.00100	0.00100	1.25E-03	8.39E-05	2.09E-04	5.57E-03	2.79E-03	3.68E-04	T
99876	P-CYMENE	134.00	SRC	1.460E+00	DAUBERT,TE &	0	0.00100	0.00100	0.00100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F
99978	N,N,4-TRIMETHYLANILINE	135.00	ALD	1.778E-01	CHAO,J ET AL	0	0.00099	0.00099	0.00099	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	F

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## **Appendix D**

### **Contacts Made to Solicit Product and Material Use Information**

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## USAGE DATA

### SCHOOLS-ELEMENTARY AND SECONDARY

-1-

**Organization:** National School Supply and Equipment Association  
**Phone #:** 301-495-0240  
**Contact:** Bill Duffy  
**Data:** Exists but not available to non-members  
**Comments:** The data is provided by certain manufacturers that are members of this association. It is broken down into different furniture categories (e.g. chair), and further into sub-categories (e.g. types of chairs). Data may be made available if the members agree at their next monthly meeting, end of November.

-2-

**Organization:** National Education Association  
**Phone #:** 202-833-4000  
**Contact:** John Keating  
**Data:** None  
**Comments:** Contact the National School Board Association.

-3-

**Organization:** National School Board Association.  
**Phone #:** 703-838-6722  
**Contact:** Dotty Grey  
**Data:** None  
**Comments:** Contact the Association of Business Officials.

-4-

**Organization:** Association of Business Officials.  
**Phone #:** 703-478-0405  
**Contact:** Robert Gluck  
**Data:** None  
**Comments:** Contact the Council for Educational Facility Planners

Organization: Council for Educational Facility Planners  
Phone #: 602-948-2337  
Contact: Debbie Moore  
Data: Possible  
Comments: Obtain (1) Guide for planning educational facilities construction; (2)  
Guide for school facility appraisal

Contact: Hal Levin (Architect)  
Phone #: 408-425-3946  
Fax #: 408-426-6522  
Data: Conducted study for EMSL, for Lance Wallace defining usage of  
building materials in four buildings: - an office, a school, a house and a  
library. The study defined the area and mass of each material/unit area  
and of volume for the space where material is located. The school that  
was studied had been built in the 70's, had recently been renovated and  
additional buildings had recently been built.  
Comments: To date, the report has not been completed but Mr. Levin has agreed to  
make his overheads available upon his return from his trip on  
November 11, 1993.

Awaiting literature from Mr. Levin.

#### DATA STATUS - SCHOOLS

- (1) Furnishing data from specific manufacturers. Data is categorized under specific furnishing item (such as chair, desk, etc.) and lists total number of sales per item. *(awaiting information from data source)* (1)
- (2) Usage data of building materials in a school is available. Data gathered using measurements of building plans and specifications. *(awaiting information from data source)* (6)

## HOSPITALS

-1-

Organization: American Society for Hospital Engineering  
Phone #: 312-280-6180  
Contact: Maggie  
Data: None  
Comments: Contact Kerry Hacker or Joanne Osenloch (consumer products section). Contact American Society for Healthcare and Environmental Services (ASHES).

-2-

Organization: American Society for Healthcare and Environmental Services (ASHES)  
Phone #: 312-280-3365  
Contact: Rodger Jordan  
Data: None  
Comments: Contact Richard Schalich of Thomas Jefferson Hospital(Laundry and Linen)

-3-

Organization: Thomas Jefferson Hospital (Laundry and Linen)  
Phone #: 215-955-8107.  
Contact: Richard Schalich  
Data: None  
Comments: List of chemicals used for laundry and linen provided. Suggestion to call the chemical manufacturers (e.g. UNX and Echo Labs) for data.

-4-

Organization: American Society for Hospital Engineering  
Phone #: 312-280-6180  
Contact: Joanne Osenloch  
Data: None  
Comments: Contact ASHES.

3

-5-

Organization Echo-Labs  
Phone #: 1-800-352-5326  
Contact: Jay Mcfarlin.  
Data: None  
Comments: Annual sales break down not available. Nursing homes spend 11 cents per room per day for laundry. Suggested contacting individual hospitals or hotels and survey their use of sanitation products. Suggested that hotels should have a minimum of 70% occupancy before being considered in survey.

-6-

Organization: UNX  
Phone #: 919-7568616  
Contact: Kendal Cowne  
Phone #: 703-594-2344  
Comments: Awaiting response

-7-

Organization: American Society for Hospital Materials Management  
Phone #: 312-280-6137  
Contact: Sandra Herren  
Phone #: 312-280-6156  
Data: None  
Comments: Suggested purchasing the Health Devices Source Book available from the Emergency Care Research Institute (ECRI).

-8-

Organization: Emergency Care Research Institute (ECRI)  
Phone #: 215-825-6000  
Contact: Jenny  
Data: None  
Comments: The Health Devices Source Book is published annually and it lists instruments.  
Followup: Followup not necessary as the Health Devices Source Book does not contain relevant information.

4



-9-

Organization: Emergency Care Research Institute  
Phone #: 215-825-6000  
Contact: Stan Popewiny (Resources)  
Data: None  
Comments: Contact Larry Muscarella.

-10-

Organization: American Society for Hospital Materials Management  
Phone #: 312-280-6137  
Contact: Larry Muscarella  
Data: Some data may be available in the following 2 articles

- (1) Disinfection practices for endoscopes and other semi critical items by Bill Rutala et al. in the Journal of Infection Control and Hospital Epidemiology (May 1991, Vol. 12 #5 282-288)
- (2) Infection control practices in gastrointestinal endoscopy in the U.S. "A National Study" by Gorse and Messner, Journal of Infection Control and Hospital Epidemiology (1991, Vol. 12, 289-296)

Comments: He will contact us if he finds more data pertaining to our search.  
Followup: Articles on order.

-11-

Organization: Health Care Material Management Society  
Phone #: 1-800-543-5885  
Contact: Dick Warmanen  
Data: None  
Comments: Data regarding consumer products are decided upon by either the epidemiology committees of hospitals and/or house keeping, nursing or environmental services. Building materials are decided upon by state, local fire departments/regulations, EPA or OSHA. Furnishings differ hospital by hospital and funds available determine this factor. No standard information available. Contact the American Hospital Association in Chicago.

-12-

Organization: American Hospital Association Resource Center  
Phone #: 312-280-6000  
Contact: Joanne  
Data: None  
Comments: Information may be available through the Health  
Planning and Administration Data Base available through  
dialogue, BRS and Med line.

-13-

Source: Health Planning and Administration Data Base  
Data: None  
Comments: Search conducted.

-14-

Organization: International Association of Hospital Central  
Service management  
Phone #: 312-440-0078  
Contact: Annette Battie  
Comments: Contact local chapter, Waneeta Mathews.

-15-

Organization: International Association of Hospital Central  
Service management, local chapter  
Phone #: 302-645-3327  
Contact: Waneeta Mathews  
Comments: Awaiting response.

-16-

Organization: National Association of Hospitals Purchasing Materials Management  
Phone #: 717-242-0106  
Comments: Wrong number. Does not exist in 717 area code.

-17-

Organization: Veterans Administration Hospitals  
Phone #: 202-233-4313  
Contacts: Joselyn Kirr  
Data: None  
Comments: VA hospitals function independently of each other. Purchasing is done by individual hospitals from specific companies with contracts with GSA. Only medical, lab and nonperishable food items purchased on a National basis.

-18-

Organization: Columbia Health Care Corporation  
Phone #: 502-580-1000  
Contact: Barbara Wright  
Data: None  
Comments: Contact META Associates regarding usage of building materials in hospitals as they are responsible for the design and construction of Columbia and Humana hospitals; contact Mrs. Sidway for purchasing information on furnishings; contact Mike Grannan for purchasing information on cleaning supplies

-19-

Organization: META Associates (Design and Construction Company)  
Phone #: 502-569-1400  
Contact: Susan Phillipson  
Data: None  
Comments: Data not documented.

-20-

Organization: Columbia Health Care Corporation  
Phone #: 502-580-1000  
Contact: Mrs. Sidway (purchasing)  
Data: Possible  
Comments: Suggested purchasing the American Hospital Association Guide to the Health Care field. The documents list all hospitals in the U.S. and their sizes.

7

Organization: Columbia Health Care Corporation  
Phone #: 502-580-1000  
Contact: Mike Grannan (Purchasing)  
Data: None  
Comments: Lisa Hutchinson took his call and informed us that they  
have no time to gather such data for us.

DATA STATUS - HOSPITALS

- (1) List of chemicals used for hospital laundry and linen (-3-)
- (2) Data may be available on use of disinfectants in hospital practices. (*awaiting journal articles*) (-10-)
- (3) Size of U.S. hospitals may be used to derive furnishing data (-20-)

NURSING HOMES

-1-

Organization: American Association of Homes for the Aging.  
Phone #: 202-783-2242  
Contact: Evie Munley  
Comments: Call back after Fri. Nov. 5th. Left phone mail message  
for Evi.

-2-

Organization: American Health Care Association (Resource Center)  
Phone #: 202-842-4444  
Contact: Christie Rumbaletti  
Data: None  
Comments: None

-3-

Organization: National Hospice Organization  
Phone #: 703-243-5900  
Contact: Maggie  
Data: None  
Comments: None

DATA STATUS

Currently no data available.

OFFICE BUILDINGS

-1-

Organization: Business and Institutional Furniture Manufacturers Association  
Phone #: 616-243-1681  
Contact: Tom Reardon.  
Data: Some data may be available from the current industrial report series for office furniture.  
Comments: In 1992 the annual sales of office furniture was 7.63 billion dollars. Statistical data is available to members. A document is available to non-members for \$25.00 which describes an overview of office sales, exports, and imports. It also contains historical background information, factors contributing to market shift. It also has the annual sales of office furniture for the past decade. A product mix is available for the past 4-5 years. He also mentioned the current industrial report series for office furniture (1991). MA25H. \$1.00.  
Action: Document MA25H on order.

-2-

Organization: Office Products Reps Assn.  
Phone #: 312-360-0386  
Contact: Jerry  
Data: None  
Comments: None

-3-

Organization: Wholesale Stationers Association  
Phone #: 708-240-1909  
Contact: Laurie  
Data: None  
Comments: Monthly statistics are maintained that are available to their U.S. and Canadian members only. A report is available with a break down of office furniture sales for \$300.  
Result: The table of contents for this report was reviewed and found to be of no relevance.

-4-

Organization: Computer and Business Equipment Manufacturers Association  
Phone #: 202-737-8888.  
Comments: Left several phone mail messages for the Statistics and Publications department. Awaiting response.

-5-

Organization National Office Products Association  
Phone #: 703-549-9040  
Contact: Fay Peterson and Ann Griffith.  
Data: Two sets of information available. (1) The 1993 Report to the National Office Products Association on distribution trends in office supplies. (2) Market Potential Analysis Usage Guide  
Comments: The 1993 report to the National Office Products Association on distribution trends in office supplies has been reviewed. It does not include relevant data. A sample Market Potential Analysis Usage Guide has been reviewed and the full report has been ordered.

-6-

Contact: Hal Levin (Architect)  
Phone #: 408-425-3946  
Fax #: 408-426-6522  
Data: Conducted study for EMSL, for Lance Wallace defining usage of building materials in four buildings: - an office, a school, a house and a library. The study defined the area and mass of each material/unit area and of volume for the space where material is located. The office building studied was a typical, fairly recently renovated office building in San Francisco. The studies were presented at the International Society for Exposure Assessment in Atlanta approximately two years ago. To date, the report has not been completed but Mr. Levin has agreed to make his overheads available upon his return from his trip on November 11, 1993.

Awaiting literature from Mr. Levin.

DATA STATUS - OFFICES

- (1) Data on office furniture sales derived from the current industrial report series for office furniture. *(Report is on order)* (-1-)
- (2) Data on itemized office furniture sales derived from the Market Potential Annual Usage Guide. *(Report is on order)* (-5-)
- (3) Usage data of building materials in an office building is available. Data gathered using measurements of building plans and specifications. *(Awaiting information from data source)* (-6-)



## PUBLIC ACCESS BUILDINGS

-1-

Organization: International Council of Shopping Centers  
Phone #: 212-421-8181  
Data: None  
Comments: The only information available is the shopping center operation revenue expenses (SCORE) document. It is concerned with the revenue and profitability aspect of shopping centers. Suggested contacting the Urban Land Institute.

-2-

Organization: Urban Land Institute  
Phone #: 202-624-7000  
Data: None  
Comments: None

-3-

Contact: Hal Levin (Architect)  
Phone #: 408-425-3946  
Fax #: 408-426-6522  
Data: Conducted study for EMSL, for Lance Wallace defining usage of building materials in four buildings: - an office, a school, a house and a library. The study defined the area and mass of each material/unit area and of volume for the space where material is located. These studies were presented at the International Society for Exposure Assessment in Atlanta approximately two years ago. To date, the report has not been finished but Mr. Levin has agreed to make his overheads available upon his return from his trip on November 11, 1993.

Awaiting literature from Mr. Levin.

### DATA STATUS - PUBLIC ACCESS BUILDINGS

- (1) Usage data of building materials in a library is available. Data has been gathered using measurements of building plans and specification. (*Awaiting information from data source*) (-3-)

HOTELS

-1-

Organization: American Hotel and Motel Associations  
Phone #: 202-289-3100  
Contact: Laura Turbe  
Data: None  
Comments: Articles available that address trends and may have percentages in them. The charge for research for non-members is \$25.00. Contact B&B association and Resort Owners Association.

-2-

Organization: Resort and Commercial Recreation Association  
Phone #: 813-845-7373  
Contact: Frank Oliveto  
Data: None  
Comments: Call American Resort Development.

-3-

Organization: American Resort Development  
Phone #: 202-371-6700  
Contact:  
Data:  
Comments: Call back after November 4th. All employees at their fall conference.

-4-

Organization: Sheraton  
Phone #: 617-367-3600  
Contact:  
Data: None. Proprietary information which cannot be released.

-5-

Organization: Holiday Inn  
Phone #: 404-604-2000  
Contact: Webb Meyers  
Data: Will send information on furnishing specifications.

**DATA STATUS - HOTELS**

- (1) Furnishing specifications for Holiday Inn (*Awaiting information from data source*)  
(-5-)

## RESTAURANTS

-1-

Organization: National Restaurant Association  
Phone #: 202-331-5900  
Contact: Mary Martin  
Data: None  
Comments: Suggested calling cleaning supply manufacturing companies.

-2-

Organization: Food Service and Lodging Institute  
Phone #: 202-659-9060  
Comments: No reply. Association is not listed in the Washington D.C. metropolitan area.

-3-

Organization: McDonalds  
Phone #: 703-698-4000  
Contact: Joanne Whalon  
Data: On the average, each facility has 70-90 seats and approximately 20 to 30 tables. The exact information is dependent on each facilities' size and style. All McDonalds but one have ceramic tile floor. The chairs and top of tables are laminated plastic.

-4-

Organization: Bennigan's  
Phone #: 214-404-5000  
Contact: Sherry  
Data:  
Comments: Awaiting response.

### DATA STATUS - RESTAURANTS

- (1) General data on furnishings from McDonalds.

## VEHICLES

-1-

Organization: Automotive Parts and Accessories Association  
Phone #: 301-654-6664  
Contact: Ed Renaud (Research)  
Data: None  
Comments: Contact the manufacturers.

-2-

Organization: American Automobile Manufacturers Association  
Phone #: 313-872-4311  
Contact: Paul Zajac  
Data: None

-3-

Organization: National Assn. of Fleet Administrators  
Phone #: 908-494-8100  
Contact: Brian Lewin  
Data: None  
Comments: Contact the Society of Automotive Engineers library

-4-

Organization: Society of Automotive Engineers  
Phone #: 412-776-4841  
Contact: Janet  
Data: None

-5-

Organization: General Motors Corporation  
Phone #: 313 556-5000  
Contact: Pam Johnson (Information Services)  
Data: None  
Comments: Contact the GM Design Center, Automotive Information Services.

Organization: GM Design Center, Automotive Information Services  
Phone #: 313-556-3998  
Contact: Monica Cotei  
Data:  
Comments: Awaiting response

DATA STATUS - VEHICLES

Currently no Data available.

OTHER USAGE INFORMATION CONTACTS

-1-

Organization: EPA/Indoor Air  
Phone #: 202-233-9053  
Contact: Dave MUDarri  
Comments: Contact Jean Tucker and Hal Levin

-2-

Organization: EPA/RTP  
Phone #: 919-541-2746  
Contact: Jean Tucker  
Comments: Contact Pat Kennedy, Christina Cinalli, and James White

-3-

Organization: EPA/RTP  
Phone #: 919-541-1189  
Contact: James White  
Data:  
Comments: Will be contacted

-4-

Organization: EPA/EAD  
Phone #: 202-260-1801  
Contact: Matt Gillen  
Data: None  
Comments: Trade unions do not commission studies. Contact Scott Schneider, Center to Protect Workers Rights; Mike Andrews, Painters Association; Bill Borwegan, Service Employees International Union; Lynn Reinhardt, Department of Occupational Safety and Health for AFL-CIO; and Conrad Flessner, EPA/OPPT.

-5-

Organization: Center to Protect Workers Rights  
Phone #: 202-962-8490  
Contact: Scott Schneider  
Data: None  
Comments: Contact Ron Medford at Consumer Product Safety Commission (CPSC).

-6-

Organization: Consumer Products Safety Commission (CPSC)  
Phone #: 301-504-0554  
Contact: Ron Medford  
Data: None  
Comments: Contact Skip Schaeffer, CPSC, Health Sciences Department; Dr. Gupta, Health Sciences Department; and Greg Schweer, Versar.

-7-

Organization: Painters Association  
Phone #: 202-637-0744  
Contact: Mike Andrews  
Data: None  
Comments: Contact Painting and Decorating Contractors Association (contacted previously), Dr. Bernard Appleman of Steel Structure Painting Association.

-8-

Organization: AFL-CIO, Department of Safety and Health  
Phone #: 202-637-5210  
Contact: Lynn Reinhart  
Data: None  
Comments: Awaiting response.

-9-

Organization: SEIV  
Phone #: 202-898-3200  
Contact: Bill Borwegan  
Data:  
Comments: Out of country until November 9.

20



-10-

Organization: Consumer Products Safety Commission (CPSC), Health Sciences  
Phone #: 301-504-0957  
Contact: Skip Schaffer  
Data:  
Comments: Awaiting response.

-11-

Organization: Steel Structure Painting Counsel  
Phone #: 412-687-1113  
Contact: Dr. Bernard Appleman  
Data:  
Comments: Awaiting response.

-12-

Organization: Chemical Specialties Manufacturers Association  
Phone #: 202-872-8110  
Contact: Joanne Weaver  
Data: No data available

-13-

Organization: New York Department of Environmental Conservation  
Division of Air Resources  
Phone #: 518-457-7231  
Contact: Debbie Gardell  
Data: Might have some data on VOC emissions from consumer products but would not be able to get it to us for at least a month

FORMULATION AND EMISSION DATA

-1-

Organization: Green Seal Group  
Phone #: 202-331-7337  
Fax #: 202-331-7533  
Contact: Rob Beal  
Data: Available  
Comments: A copy of products faxed to him. A study conducted by the University of Tennessee; Center for Clean Products by Gary Davis. Also contact Joel Ann Todd (Scientific Consulting Services) regarding life cycle analysis of building materials and Battelle (Bruce Vigon) regarding life cycle analysis of carpets. A document prepared by IBM on emissions from computers and a copy of a report on emission from household cleaners will be sent to us.

-2-

Organization: EPA Life Cycle Assessment Group ORD CIN  
Phone #: 513-569-7837  
Contact: Mary Ann Cunan and Vigon  
Data: None  
Comment: Refer to Carpet Policy Dialogue for emissions information.  
Followup: The Carpet Policy Dialogue has been reviewed. It does not appear to contain useful data.

-3-

Organization: EPA Life Cycle Assessment Group OAQPS/RTP  
Phone #: 919-541-0467  
Contact: Chuck French  
Data: None  
Comment: He deals with stack emissions.

-4-

Organization: U.S. EPA - OPTS  
Phone #: 202-260-3918  
Contact: Conrad Flessner  
Data: OPTS/GSA study just getting started. GSA might have some information - contact Shirley Hadrick (GSA) (202) 501-1061 after November 15.

DATA STATUS - FORMULATIONS AND EMISSIONS

- (1) Emissions from computers (*information is being forwarded*) (-1-)
- (2) Emissions from household cleaners (*information is being forwarded*) (-1-)

## **Appendix E**

### **Product-Environment Files**

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Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
1	202626300	50.00	100.00	PJ	0.00800	0.01700	PJ	26.00	52.00	PJ	0.53900
1	207910000	2.00	4.00	PJ	0.00800	0.01700	PJ	90.00	180.00	PJ	0.25000
1	283400000	1.00	2.00	PJ	0.01670	0.03300	PJ	2.00	4.00	PJ	0.15000
1	283411500	0.50	1.00	PJ	0.00800	0.01670	PJ	12.00	24.00	PJ	0.06000
1	283429000	1.00	2.00	PJ	0.00800	0.01670	PJ	36.00	365.00	PJ	0.35200
1	283445000	1.00	2.00	PJ	0.00800	0.01670	PJ	6.00	12.00	PJ	0.73200
1	283445100	1.00	2.00	PJ	0.00800	0.01670	PJ	6.00	12.00	PJ	0.14400
1	283452000	1.00	2.00	PJ	0.00800	0.01670	PJ	12.00	104.00	PJ	0.21800
1	283452900	50.00	100.00	PJ	0.00800	0.01670	PJ	2.00	4.00	PJ	0.15000
1	283458300	5.00	10.00	PJ	0.00800	0.01670	PJ	52.00	104.00	PJ	0.21600
1	283459800	1.00	2.00	PJ	0.00800	0.01670	PJ	12.00	24.00	PJ	0.15000
1	283461100	10.00	20.00	PJ	0.01670	0.03300	PJ	12.00	24.00	PJ	0.15000
1	283461600	10.00	20.00	PJ	0.01670	0.03300	PJ	12.00	24.00	PJ	0.15000
1	283461800	10.00	20.00	PJ	0.01670	0.03300	PJ	12.00	24.00	PJ	0.15000
1	283461900	10.00	20.00	PJ	0.01670	0.03300	PJ	12.00	24.00	PJ	0.15000
1	283462100	1.00	2.00	PJ	0.00833	0.01670	PJ	12.00	24.00	PJ	0.21800
1	283463000	10.00	20.00	PJ	0.01670	0.03300	PJ	12.00	104.00	PJ	0.47200
1	283463100	10.00	20.00	PJ	0.01670	0.03300	PJ	12.00	104.00	PJ	0.22300
1	283463500	10.00	20.00	PJ	0.01670	0.03300	PJ	12.00	104.00	PJ	0.02400
1	283463700	10.00	20.00	PJ	0.01670	0.03300	PJ	12.00	104.00	PJ	0.02400
1	283463900	10.00	20.00	PJ	0.01670	0.03300	PJ	12.00	104.00	PJ	0.11600
1	283469800	10.00	20.00	PJ	0.01670	0.03300	PJ	12.00	104.00	PJ	0.15000
1	283484100	1.00	2.00	PJ	0.00833	0.01670	PJ	12.00	24.00	PJ	0.54600
1	283486500	1.00	2.00	PJ	0.00833	0.01670	PJ	12.00	24.00	PJ	0.18000
1	283487100	1.00	2.00	PJ	0.00833	0.01670	PJ	12.00	24.00	PJ	0.54600
1	283490000	1.00	2.00	PJ	0.00833	0.01670	PJ	12.00	24.00	PJ	0.15000
1	284117700	10.00	20.00	PJ	0.50000	1.00000	PJ	2.00	6.00	PJ	0.28300
1	284120100	56.70	113.40	PJ	0.33000	0.66000	PJ	156.00	312.00	PJ	1.00000
1	284120300	28.35	56.70	PJ	0.33000	0.66000	PJ	156.00	312.00	PJ	1.00000
1	284120400	5.00	10.00	PJ	0.70000	1.41000	PJ	1204.00	2712.00	PJ	1.00000
1	284120500	5.00	10.00	PJ	0.70000	1.41000	PJ	1204.00	2749.00	PJ	1.00000
1	284120600	2.00	4.00	PJ	0.70000	1.40000	PJ	1204.00	2712.00	PJ	1.00000
1	284120900	5.00	10.00	PJ	0.36000	0.67000	PJ	568.00	1253.00	PJ	1.00000
1	284121100	5.00	10.00	PJ	0.36000	0.67000	PJ	568.00	1253.00	PJ	1.00000
1	284122000	100.00	200.00	PJ	0.33000	0.66000	PJ	226.00	563.00	PJ	1.00000
1	284122100	100.00	200.00	PJ	0.33000	0.66000	PJ	226.00	563.00	PJ	1.00000
1	284122400	100.00	200.00	PJ	0.33000	0.66000	PJ	226.00	563.00	PJ	1.00000
1	284122600	100.00	200.00	PJ	0.33000	0.66000	PJ	226.00	563.00	PJ	1.00000
1	284123000	200.00	400.00	PJ	0.33000	0.66000	PJ	65.00	242.00	PJ	1.00000
1	284123100	200.00	400.00	PJ	0.33000	0.66000	PJ	65.00	242.00	PJ	1.00000
1	284123500	200.00	400.00	PJ	0.33000	0.66000	PJ	65.00	242.00	PJ	1.00000
1	284126100	100.00	200.00	PJ	0.33000	0.66000	PJ	87.00	287.00	PJ	1.00000
1	284130000	0.25	0.50	PJ	0.01000	0.02000	PJ	2000.00	4000.00	PJ	1.00000
1	284131200	0.25	0.50	PJ	0.01000	0.02000	PJ	2000.00	4000.00	PJ	1.00000
1	284131300	0.25	0.50	PJ	0.01000	0.02000	PJ	2000.00	4000.00	PJ	1.00000
1	284131400	0.25	0.50	PJ	0.01000	0.02000	PJ	2000.00	4000.00	PJ	1.00000
1	284131500	2.00	4.00	PJ	0.01000	0.02000	PJ	2000.00	4000.00	PJ	1.00000
1	284139800	1.00	2.00	PJ	0.01000	0.02000	PJ	104.00	208.00	PJ	1.00000
1	284220000	50.00	100.00	PJ	0.33300	0.66700	PJ	67.00	211.00	PJ	0.74400
1	284224300	50.00	100.00	PJ	0.33300	0.66700	PJ	67.00	211.00	PJ	0.74400
1	284225300	50.00	100.00	PJ	0.33300	0.66700	PJ	67.00	211.00	PJ	0.74400
1	284231100	0.50	1.00	PJ	0.02000	0.03000	PJ	99.00	246.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
1	284232100	453.60	907.20	PJ	0.50000	1.00000	PJ	2.00	5.92	PJ	1.00000
1	284232600	12.00	24.00	PJ	0.08000	0.17000	PJ	27.00	70.32	PJ	1.00000
1	284232800	907.20	1814.40	PJ	0.01000	0.02000	PJ	1.36	3.70	PJ	1.00000
1	284233000	5.00	10.00	PJ	0.34000	0.75000	PJ	104.00	364.00	PJ	1.00000
1	284233200	0.50	1.00	PJ	0.01000	0.02000	PJ	120.00	240.00	PJ	1.00000
1	284234100	15.00	30.00	PJ	0.33300	0.66700	PJ	237.00	589.00	PJ	0.63600
1	284234400	30.00	60.00	PJ	0.33300	0.66700	PJ	237.00	589.00	PJ	0.63600
1	284234600	15.00	30.00	PJ	0.33300	0.66700	PJ	237.00	589.00	PJ	0.63600
1	284234800	1.00	2.00	PJ	0.02000	0.03000	PJ	260.00	520.00	PJ	1.00000
1	284234900	1.80	3.60	PJ	0.02000	0.03000	PJ	15.90	40.00	PJ	1.00000
1	284235000	142.00	284.00	PJ	1.00000	2.00000	PJ	2.40	5.96	PJ	1.00000
1	284235100	142.00	284.00	PJ	1.00000	2.00000	PJ	2.40	5.96	PJ	1.00000
1	284237100	5.00	10.00	PJ	0.02000	0.03000	PJ	52.00	156.00	PJ	0.07000
1	284238100	5.00	10.00	PJ	0.01670	0.03300	PJ	156.00	260.00	PJ	0.59700
1	284238500	56.70	113.40	PJ	2920.00000	2920.00000	PJ	3.00	6.00	PJ	0.59700
1	284239000	300.00	600.00	PJ	1248.00000	1248.00000	PJ	52.00	208.00	PJ	0.16600
1	284239700	4.00	8.00	PJ	0.02000	0.03000	PJ	51.44	121.00	PJ	1.00000
1	284241100	113.00	226.00	PJ	1.00000	2.00000	PJ	6.00	12.00	PJ	1.00000
1	284241500	1.00	2.00	PJ	0.00500	0.01000	PJ	520.00	1040.00	PJ	1.00000
1	284242000	295.00	524.00	PJ	1.23000	2.45000	PJ	8.48	24.00	PJ	1.00000
1	284242100	295.00	524.00	PJ	1.23000	2.45000	PJ	8.48	24.00	PJ	1.00000
1	284242300	295.00	524.00	PJ	1.23000	2.45000	PJ	8.48	24.00	PJ	1.00000
1	284242500	295.00	524.00	PJ	1.23000	2.45000	PJ	8.48	24.00	PJ	1.00000
1	284244300	74.30	179.00	PJ	0.08000	0.17000	PJ	10.30	24.30	PJ	1.00000
1	284246300	56.70	113.40	PJ	0.08000	0.17000	PJ	8.00	16.00	PJ	1.00000
1	284249800	1.73	3.46	PJ	0.08000	0.17000	PJ	2.00	5.92	PJ	1.00000
1	284300000	186.50	373.00	PJ	0.50000	1.00000	PJ	2.00	4.00	PJ	1.00000
1	284303100	186.50	373.00	PJ	0.50000	1.00000	PJ	1.00	2.00	PJ	1.00000
1	284306100	186.50	373.00	PJ	0.50000	1.00000	PJ	2.00	4.00	PJ	1.00000
1	284400000	0.23	0.46	PJ	0.01000	0.01000	PJ	113.20	409.00	PJ	1.00000
1	284414900	1.73	3.46	PJ	0.05000	0.10000	PJ	365.00	493.00	PJ	1.00000
1	284415600	0.23	0.46	PJ	0.00167	0.00167	PJ	319.00	450.00	PJ	0.70700
1	284415900	0.23	0.46	PJ	0.00167	0.00167	PJ	319.00	450.00	PJ	0.70700
1	284420000	0.23	0.46	PJ	0.01000	0.01000	PJ	113.20	409.00	PJ	1.00000
1	284421100	0.23	0.46	PJ	0.01000	0.01000	PJ	113.20	409.00	PJ	1.00000
1	284422300	0.23	0.46	PJ	0.01000	0.01000	PJ	113.20	409.00	PJ	1.00000
1	284423500	0.23	0.46	PJ	0.01000	0.01000	PJ	113.20	409.00	PJ	1.00000
1	284424500	0.23	0.46	PJ	0.01000	0.01000	PJ	113.20	409.00	PJ	1.00000
1	284430000	16.40	32.80	PJ	0.05000	0.10000	PJ	266.00	417.00	PJ	1.00000
1	284431000	16.40	32.80	PJ	0.05000	0.10000	PJ	266.00	417.00	PJ	1.00000
1	284431200	16.40	32.80	PJ	0.05000	0.10000	PJ	266.00	417.00	PJ	1.00000
1	284431500	16.40	32.80	PJ	0.05000	0.10000	PJ	266.00	417.00	PJ	1.00000
1	284431800	12.40	24.80	PJ	0.05000	0.10000	PJ	130.00	348.00	PJ	1.00000
1	284432200	2.85	5.70	PJ	0.05000	0.10000	PJ	204.00	456.00	PJ	1.00000
1	284432600	5.00	10.00	PJ	0.03000	0.07000	PJ	204.00	419.12	PJ	1.00000
1	284433900	101.00	202.00	PJ	0.75000	1.50000	PJ	1.66	5.19	PJ	1.00000
1	284434100	10.00	20.00	PJ	0.03000	0.07000	PJ	1.66	5.19	PJ	1.00000
1	284435100	227.00	554.00	PJ	0.75000	1.50000	PJ	31.68	43.74	PJ	1.00000
1	284436300	5.00	10.00	PJ	0.00500	0.01000	PJ	325.00	499.00	PJ	1.00000
1	284436400	10.00	20.00	PJ	0.00500	0.01000	PJ	325.00	499.00	PJ	1.00000
1	284436500	12.70	25.40	PJ	0.03000	0.07000	PJ	44.50	235.00	PJ	1.00000
1	284439500	227.00	554.00	PJ	0.75000	1.50000	PJ	7.85	51.10	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
1	284442100	1.00	2.00	PJ	0.01670	0.03300	PJ	730.00	1460.00	PJ	0.94100
1	284443100	1.00	2.00	PJ	0.01670	0.03300	PJ	104.00	260.00	PJ	0.17000
1	284449800	2.60	5.20	PJ	0.01670	0.03300	PJ	312.00	624.00	PJ	0.57000
1	284461000	2.00	4.00	PJ	0.01670	0.03300	PJ	331.00	752.00	PJ	0.22600
1	284461100	1.70	3.40	PJ	0.01670	0.03300	PJ	331.00	752.00	PJ	0.22600
1	284461300	2.00	4.00	PJ	0.01670	0.03300	PJ	331.00	752.00	PJ	0.22600
1	284461500	2.00	4.00	PJ	0.01670	0.03300	PJ	331.00	752.00	PJ	0.22600
1	284461700	2.00	4.00	PJ	0.01670	0.03300	PJ	331.00	752.00	PJ	0.22600
1	284461900	0.54	1.08	PJ	0.01670	0.03300	PJ	331.00	752.00	PJ	0.22600
1	284462100	250.00	1500.00	PJ	0.01670	0.03300	PJ	14.00	28.00	PJ	0.04600
1	284462200	250.00	1500.00	PJ	0.01670	0.03300	PJ	14.00	28.00	PJ	0.16600
1	284462300	5.00	10.00	PJ	0.01670	0.03300	PJ	331.00	752.00	PJ	0.55500
1	284462400	5.00	10.00	PJ	0.01670	0.03300	PJ	331.00	752.00	PJ	0.08400
1	284462500	5.00	10.00	PJ	0.01670	0.03300	PJ	331.00	752.00	PJ	0.55500
1	284462600	5.00	10.00	PJ	0.01670	0.03300	PJ	331.00	752.00	PJ	0.55500
1	284462900	5.00	10.00	PJ	0.01670	0.03300	PJ	331.00	752.00	PJ	0.55500
1	284471100	1.00	2.00	PJ	0.01670	0.03300	PJ	960.00	2785.00	PJ	0.80500
1	284471500	0.01	0.02	PJ	0.01670	0.03300	PJ	365.00	624.00	PJ	0.68100
1	284472100	1.00	2.00	PJ	0.01670	0.03300	PJ	321.00	504.00	PJ	0.62900
1	284472500	50.00	100.00	PJ	0.01670	0.03300	PJ	48.00	144.00	PJ	0.45300
1	284473100	0.50	1.00	PJ	0.00417	0.00833	PJ	730.00	1460.00	PJ	0.22300
1	284473500	0.50	1.00	PJ	0.00417	0.00833	PJ	730.00	1460.00	PJ	0.86400
1	284474100	0.28	0.56	PJ	0.01670	0.03300	PJ	48.00	120.00	PJ	0.47300
1	284474500	3.06	6.12	PJ	0.01670	0.03300	PJ	48.00	120.00	PJ	0.54800
1	284475100	0.48	0.96	PJ	0.01670	0.03300	PJ	12.00	60.00	PJ	0.32700
1	284475500	0.80	1.60	PJ	0.01670	0.03300	PJ	48.00	144.00	PJ	0.25000
1	284476100	5.00	10.00	PJ	0.01670	0.03300	PJ	336.00	749.00	PJ	0.51100
1	284476500	5.00	10.00	PJ	0.01670	0.03300	PJ	48.00	144.00	PJ	0.25000
1	284477100	15.10	30.20	PJ	0.01670	0.03300	PJ	182.00	365.00	PJ	0.47500
1	284477500	5.00	10.00	PJ	0.01670	0.03300	PJ	365.00	730.00	PJ	0.25000
1	284478100	2.51	5.03	PJ	0.01670	0.03300	PJ	156.00	730.00	PJ	0.32900
1	284478500	110.00	220.00	PJ	0.08330	0.17000	PJ	6.00	20.00	PJ	0.17700
1	284479500	1.39	2.78	PJ	0.01670	0.03300	PJ	365.00	730.00	PJ	0.33300
1	285100000	209.00	498.00	PJ	0.20000	0.40000	PJ	5.66	6.00	PJ	1.00000
1	285110000	209.00	498.00	PJ	0.20000	0.40000	PJ	5.66	6.00	PJ	1.00000
1	285113700	0.00	0.00	PJ	0.00000	0.00000	PJ	0.00	0.00	PJ	1.00000
1	285116000	3350.00	7962.00	PJ	3.23000	8.00000	PJ	5.66	6.00	PJ	1.00000
1	285116500	3350.00	7962.00	PJ	4.92000	8.00000	PJ	3.93	6.00	PJ	1.00000
1	285116900	6003.00	13930.00	PJ	4.92000	8.00000	PJ	3.93	6.00	PJ	1.00000
1	285117100	1311.00	2924.00	PJ	1.52000	4.00000	PJ	3.43	6.00	PJ	1.00000
1	285117500	1049.00	1991.00	PJ	1.95000	2.33000	PJ	4.21	7.00	PJ	1.00000
1	285117700	1049.00	1991.00	PJ	1.95000	2.33000	PJ	4.21	7.00	PJ	1.00000
1	285118100	6003.00	13930.00	PJ	4.92000	8.00000	PJ	3.93	6.00	PJ	1.00000
1	285118300	6003.00	13930.00	PJ	4.92000	8.00000	PJ	3.93	6.00	PJ	1.00000
1	285118600	1311.00	2924.00	PJ	1.52000	4.00000	PJ	3.43	6.00	PJ	1.00000
1	285118800	6003.00	13930.00	PJ	4.92000	8.00000	PJ	3.93	6.00	PJ	1.00000
1	285126700	1049.00	1991.00	PJ	4.92000	8.00000	PJ	3.93	6.00	PJ	1.00000
1	285131300	209.00	498.00	PJ	0.20000	0.50000	PJ	5.66	6.00	PJ	1.00000
1	285133100	429.00	809.00	PJ	0.66000	1.00000	PJ	4.22	6.10	PJ	1.00000
1	285150000	209.00	498.00	PJ	0.20000	0.50000	PJ	5.66	6.00	PJ	1.00000
1	285152300	928.00	1991.00	PJ	2.00000	4.00000	PJ	3.68	6.00	PJ	0.15500
1	285153100	736.00	1991.00	PJ	0.66000	1.00000	PJ	6.78	12.00	PJ	0.22400



Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
1	285159800	209.00	498.00	PJ	0.20000	0.40000	PJ	5.66	6.00	PJ	1.00000
1	287990000	5.00	10.00	PJ	0.03300	0.06700	PJ	5.90	47.70	PJ	0.46700
1	287991000	5.00	10.00	PJ	0.03300	0.06700	PJ	5.90	47.70	PJ	0.43400
1	287991200	5.00	10.00	PJ	0.03300	0.06700	PJ	5.90	47.70	PJ	0.43400
1	287992000	5.00	10.00	PJ	0.03300	0.06700	PJ	5.90	47.70	PJ	0.43400
1	287993000	5.00	10.00	PJ	720.00000	1440.00000	PJ	19.40	45.40	PJ	0.17400
1	287994000	5.00	10.00	PJ	0.16700	0.33300	PJ	10.00	20.00	PJ	0.15000
1	287994500	5.00	10.00	PJ	2160.00000	2160.00000	PJ	4.00	8.00	PJ	0.10200
1	287997100	5.00	10.00	PJ	168.00000	168.00000	PJ	7.90	85.00	PJ	0.03300
1	287998600	5.00	10.00	PJ	0.03300	0.06700	PJ	5.90	47.70	PJ	0.46700
1	289135500	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.10700
1	289140000	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.59100
1	289141100	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.07100
1	289142400	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.10700
1	289143300	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.10700
1	289144100	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.20800
1	289144800	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.59100
1	289145300	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.10700
1	289145400	1.00	2.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.10500
1	289145700	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.10700
1	289146500	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.10700
1	289147100	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.10700
1	289149900	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.10700
1	289162500	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	0.10700
1	289170000	151.10	299.30	PJ	0.25000	0.50000	PJ	21.00	40.00	PJ	0.10700
1	289171100	151.10	299.30	PJ	0.25000	0.50000	PJ	21.00	40.00	PJ	0.10700
1	289172100	151.10	299.30	PJ	0.25000	0.50000	PJ	21.00	40.00	PJ	0.10700
1	289173100	151.10	299.30	PJ	0.25000	0.50000	PJ	21.00	40.00	PJ	0.10700
1	289174600	151.10	299.30	PJ	0.25000	0.50000	PJ	21.00	40.00	PJ	0.10700
1	289177100	151.10	299.30	PJ	0.25000	0.50000	PJ	21.00	40.00	PJ	0.10700
1	289950000	5.00	10.00	PJ	0.25000	0.50000	PJ	10.00	20.00	PJ	0.25000
1	289953400	4000.00	6000.00	PJ	0.25000	0.50000	PJ	1.00	2.00	PJ	0.25000
1	289954300	85.00	170.00	PJ	0.17000	0.33000	PJ	33.00	55.70	PJ	0.25000
1	289955300	50.00	100.00	PJ	0.25000	0.50000	PJ	5.00	10.00	PJ	0.10000
1	289957200	5.00	10.00	PJ	0.25000	0.50000	PJ	10.00	20.00	PJ	0.25000
1	289957300	50.00	100.00	PJ	0.25000	0.50000	PJ	10.00	20.00	PJ	0.10000
1	289958100	87.10	404.00	PJ	0.25000	0.50000	PJ	5.00	10.00	PJ	0.10000
1	289959300	5.00	10.00	PJ	0.25000	0.50000	PJ	10.00	20.00	PJ	0.25000
1	289959700	56.70	113.40	PJ	0.25000	0.50000	PJ	10.00	20.00	PJ	0.25000
1	2911A2200	5.00	10.00	PJ	0.01670	0.03300	PJ	30.00	60.00	PJ	0.04900
1	2911D5700	736.00	1991.00	PJ	0.66700	1.00000	PJ	6.78	12.00	PJ	0.22400
1	299202100	50.10	93.30	PJ	0.13330	0.25000	PJ	10.70	102.00	PJ	0.50000
1	299203100	50.10	93.30	PJ	0.13330	0.25000	PJ	10.70	20.00	PJ	0.50000
1	3011D3900	5.00	10.00	PJ	0.20000	0.40000	PJ	1.00	2.00	PJ	0.05000
1	329189000	50.00	100.00	PJ	0.25000	0.50000	PJ	18.00	96.00	PJ	0.42400
1	395110200	0.25	0.50	PJ	0.25000	0.50000	PJ	180.00	365.00	PJ	1.00000
1	395120000	0.25	0.50	PJ	0.25000	0.50000	PJ	180.00	365.00	PJ	1.00000
1	395120600	0.25	0.50	PJ	0.25000	0.50000	PJ	180.00	365.00	PJ	1.00000
1	395241900	10.00	20.00	PJ	0.25000	0.50000	PJ	10.00	20.00	PJ	0.25000
2	202626300	100.00	200.00	PJ	0.00800	0.01700	PJ	900.00	1800.00	PJ	1.00000
2	207910000	2.00	4.00	PJ	0.00800	0.01700	PJ	900.00	1800.00	PJ	1.00000
2	284112100	56.70	113.40	PJ	0.33000	0.66000	PJ	2700.00	5400.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
2	284112300	28.35	56.70	PJ	0.33000	0.66000	PJ	2700.00	5400.00	PJ	1.00000
2	284112500	10.00	20.00	PJ	0.03000	0.07000	PJ	2700.00	5400.00	PJ	1.00000
2	284112600	5.00	10.00	PJ	0.03000	0.07000	PJ	2700.00	5400.00	PJ	1.00000
2	284112800	5.00	10.00	PJ	0.03000	0.07000	PJ	2700.00	5400.00	PJ	1.00000
2	284114000	100.00	200.00	PJ	0.02000	0.03000	PJ	360.00	720.00	PJ	1.00000
2	284117700	10.00	20.00	PJ	0.08000	0.17000	PJ	90.00	180.00	PJ	1.00000
2	284117800	5.00	10.00	PJ	0.08000	0.17000	PJ	90.00	180.00	PJ	1.00000
2	284120100	56.70	113.40	PJ	0.33000	0.66000	PJ	2700.00	5400.00	PJ	1.00000
2	284120300	28.35	56.70	PJ	0.33000	0.66000	PJ	2700.00	5400.00	PJ	1.00000
2	284120400	5.00	10.00	PJ	0.03000	0.07000	PJ	2700.00	5400.00	PJ	1.00000
2	284120500	5.00	10.00	PJ	0.03000	0.07000	PJ	2700.00	5400.00	PJ	1.00000
2	284120600	2.00	4.00	PJ	0.03000	0.07000	PJ	2700.00	5400.00	PJ	1.00000
2	284120900	5.00	10.00	PJ	0.03000	0.07000	PJ	2700.00	5400.00	PJ	1.00000
2	284121100	5.00	10.00	PJ	0.03000	0.07000	PJ	2700.00	5400.00	PJ	1.00000
2	284130000	0.25	0.50	PJ	0.01000	0.02000	PJ	104040.00	208080.00	PJ	1.00000
2	284131200	0.25	0.50	PJ	0.01000	0.02000	PJ	104040.00	208080.00	PJ	1.00000
2	284131300	0.25	0.50	PJ	0.01000	0.02000	PJ	104040.00	208080.00	PJ	1.00000
2	284131400	0.25	0.50	PJ	0.01000	0.02000	PJ	104040.00	208080.00	PJ	1.00000
2	284131500	2.00	4.00	PJ	0.01000	0.02000	PJ	104040.00	208080.00	PJ	1.00000
2	284139800	1.00	2.00	PJ	0.01000	0.02000	PJ	360.00	720.00	PJ	1.00000
2	284230000	4.00	8.00	PJ	0.10000	0.33000	PJ	2700.00	5400.00	PJ	1.00000
2	284231100	0.50	1.00	PJ	0.02000	0.03000	PJ	720.00	1440.00	PJ	1.00000
2	284232100	453.60	907.20	PJ	0.50000	1.00000	PJ	144.00	288.00	PJ	1.00000
2	284232600	12.00	24.00	PJ	0.08000	0.17000	PJ	1152.00	2304.00	PJ	1.00000
2	284232800	907.20	1814.40	PJ	0.01000	0.02000	PJ	144.00	288.00	PJ	1.00000
2	284233000	5.00	10.00	PJ	0.08000	0.17000	PJ	2448.00	5400.00	PJ	1.00000
2	284233200	0.50	1.00	PJ	0.01000	0.02000	PJ	7200.00	14400.00	PJ	1.00000
2	284234400	30.00	60.00	PJ	0.33300	0.66700	PJ	360.00	720.00	PJ	1.00000
2	284235000	3782.00	7564.00	PJ	1.00000	2.00000	PJ	2.00	4.00	PJ	1.00000
2	284235100	3782.00	7564.00	PJ	1.00000	2.00000	PJ	2.00	4.00	PJ	1.00000
2	284235300	3782.00	7564.00	PJ	1.00000	2.00000	PJ	2.00	4.00	PJ	1.00000
2	284237100	5.00	10.00	PJ	0.02000	0.03000	PJ	52.00	156.00	PJ	1.00000
2	284238100	5.00	10.00	PJ	0.01670	0.03300	PJ	365.00	1095.00	PJ	1.00000
2	284238500	56.70	113.40	PJ	720.00000	1440.00000	PJ	72.00	144.00	PJ	1.00000
2	284239700	4.00	8.00	PJ	0.02000	0.03000	PJ	5940.00	11880.00	PJ	1.00000
2	284241500	1.00	2.00	PJ	0.00500	0.01000	PJ	2160.00	4320.00	PJ	1.00000
2	284242000	907.00	1814.00	PJ	2.00000	4.00000	PJ	54.00	108.00	PJ	1.00000
2	284242100	907.00	1814.00	PJ	2.00000	4.00000	PJ	54.00	108.00	PJ	1.00000
2	284242300	907.00	1814.00	PJ	2.00000	4.00000	PJ	54.00	108.00	PJ	1.00000
2	284242500	1200.00	2400.00	PJ	2.00000	4.00000	PJ	54.00	108.00	PJ	1.00000
2	284246300	56.70	113.40	PJ	0.08000	0.17000	PJ	32.00	64.00	PJ	1.00000
2	284249800	1.73	3.46	PJ	0.08000	0.17000	PJ	360.00	720.00	PJ	1.00000
2	284300000	186.50	373.00	PJ	0.50000	1.00000	PJ	360.00	720.00	PJ	1.00000
2	284477500	5.00	10.00	PJ	0.01670	0.03300	PJ	1800.00	3600.00	PJ	1.00000
2	285100000	4.00	8.00	PJ	0.20000	0.40000	PJ	10000.00	20000.00	PJ	1.00000
2	285110000	4.00	8.00	PJ	0.20000	0.40000	PJ	1.00	20000.00	PJ	1.00000
2	285113700	0.00	0.00	PJ	0.00000	0.00000	PJ	0.00	0.00	PJ	1.00000
2	285116000	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
2	285116500	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
2	285116900	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
2	285117100	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
2	285117500	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
2	285117700	47270.00	94540.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
2	285118100	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
2	285118300	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
2	285118600	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
2	285118800	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
2	285126700	47270.00	94540.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
2	285133100	47300.00	94600.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
2	285150000	4.00	8.00	PJ	0.20000	0.40000	PJ	10000.00	20000.00	PJ	1.00000
2	285152300	3784.00	7568.00	PJ	2.00000	4.00000	PJ	1.00	2.00	PJ	1.00000
2	285153100	3784.00	7568.00	PJ	2.00000	4.00000	PJ	1.00	2.00	PJ	1.00000
2	285159800	4.00	8.00	PJ	0.20000	0.40000	PJ	10000.00	20000.00	PJ	1.00000
2	287990000	185.00	370.00	PJ	1.00000	2.00000	PJ	36.00	72.00	PJ	1.00000
2	287991000	185.00	370.00	PJ	1.00000	2.00000	PJ	36.00	72.00	PJ	1.00000
2	287991200	185.00	370.00	PJ	1.00000	2.00000	PJ	36.00	72.00	PJ	1.00000
2	287992000	185.00	370.00	PJ	1.00000	2.00000	PJ	36.00	72.00	PJ	1.00000
2	287993000	56.70	113.40	PJ	720.00000	1440.00000	PJ	180.00	360.00	PJ	1.00000
2	287997100	185.00	370.00	PJ	168.00000	168.00000	PJ	36.00	72.00	PJ	1.00000
2	289135500	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289140000	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289141100	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289142400	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289143300	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289144100	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289144800	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289145300	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289145400	5.00	10.00	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289145700	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289146500	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289147100	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289149900	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289162500	28.40	56.80	PJ	0.17000	0.33000	PJ	10440.00	20880.00	PJ	1.00000
2	289170000	151.10	299.30	PJ	0.25000	0.50000	PJ	130.00	260.00	PJ	1.00000
2	289171100	151.10	299.30	PJ	0.25000	0.50000	PJ	130.00	260.00	PJ	1.00000
2	289172100	151.10	299.30	PJ	0.25000	0.50000	PJ	130.00	260.00	PJ	1.00000
2	289173100	151.10	299.30	PJ	0.25000	0.50000	PJ	130.00	260.00	PJ	1.00000
2	289174600	151.10	299.30	PJ	0.25000	0.50000	PJ	130.00	260.00	PJ	1.00000
2	289177100	151.10	299.30	PJ	0.25000	0.50000	PJ	130.00	260.00	PJ	1.00000
2	289954300	85.00	170.00	PJ	0.17000	0.33000	PJ	3250.00	6500.00	PJ	1.00000
2	289957200	5.00	10.00	PJ	0.25000	0.50000	PJ	3250.00	6500.00	PJ	1.00000
2	289959700	56.70	113.40	PJ	0.25000	0.50000	PJ	3250.00	6500.00	PJ	1.00000
2	2911A2200	5.00	10.00	PJ	0.01670	0.03300	PJ	30.00	60.00	PJ	0.04900
2	2911D5700	3784.00	7568.00	PJ	2.00000	4.00000	PJ	1.00	2.00	PJ	1.00000
2	299202100	50.10	93.30	PJ	0.13330	0.25000	PJ	3250.00	6500.00	PJ	1.00000
2	299203100	50.10	93.30	PJ	0.13330	0.25000	PJ	3250.00	6500.00	PJ	1.00000
2	329189000	50.00	100.00	PJ	0.25000	0.50000	PJ	50.00	100.00	PJ	1.00000
2	395110200	0.25	0.50	PJ	0.25000	0.50000	PJ	300560.00	601120.00	PJ	1.00000
2	395120000	0.25	0.50	PJ	0.25000	0.50000	PJ	150280.00	300560.00	PJ	1.00000
2	395120600	0.25	0.50	PJ	0.25000	0.50000	PJ	150280.00	300560.00	PJ	1.00000
2	395241900	10.00	20.00	PJ	0.25000	0.50000	PJ	3250.00	6500.00	PJ	1.00000
3	207910000	2.00	4.00	PJ	0.00800	0.01700	PJ	1825.00	3650.00	PJ	1.00000
3	281991500	114.00	228.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	281994000	228.00	556.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
3	283400000	1.00	2.00	PJ	0.01670	0.03300	PJ	46355.00	92710.00	PJ	1.00000
3	283411500	0.50	1.00	PJ	0.00800	0.01670	PJ	9271.00	18542.00	PJ	1.00000
3	283429000	1.00	2.00	PJ	0.00800	0.01670	PJ	9271.00	18542.00	PJ	1.00000
3	283445000	1.00	2.00	PJ	0.00800	0.01670	PJ	9271.00	18542.00	PJ	1.00000
3	283445100	1.00	2.00	PJ	0.00800	0.01670	PJ	9271.00	18542.00	PJ	1.00000
3	283452000	1.00	2.00	PJ	0.00800	0.01670	PJ	9271.00	18542.00	PJ	1.00000
3	283452900	50.00	100.00	PJ	0.00800	0.01670	PJ	9271.00	18542.00	PJ	1.00000
3	283458300	5.00	10.00	PJ	0.00800	0.01670	PJ	9271.00	18542.00	PJ	1.00000
3	283459800	1.00	2.00	PJ	0.00800	0.01670	PJ	9271.00	18542.00	PJ	1.00000
3	283461100	10.00	20.00	PJ	0.01670	0.03300	PJ	9271.00	18542.00	PJ	1.00000
3	283461600	10.00	20.00	PJ	0.01670	0.03300	PJ	9271.00	18542.00	PJ	1.00000
3	283461800	10.00	20.00	PJ	0.01670	0.03300	PJ	9271.00	18542.00	PJ	1.00000
3	283461900	10.00	20.00	PJ	0.01670	0.03300	PJ	9271.00	18542.00	PJ	1.00000
3	283462100	1.00	2.00	PJ	0.00833	0.01670	PJ	9271.00	18542.00	PJ	1.00000
3	283463000	10.00	20.00	PJ	0.01670	0.03300	PJ	9271.00	18542.00	PJ	1.00000
3	283463100	10.00	20.00	PJ	0.01670	0.03300	PJ	9271.00	18542.00	PJ	1.00000
3	283463500	10.00	20.00	PJ	0.01670	0.03300	PJ	9271.00	18542.00	PJ	1.00000
3	283463700	10.00	20.00	PJ	0.01670	0.03300	PJ	9271.00	18542.00	PJ	1.00000
3	283463900	10.00	20.00	PJ	0.01670	0.03300	PJ	9271.00	18542.00	PJ	1.00000
3	283469800	10.00	20.00	PJ	0.01670	0.03300	PJ	9271.00	18542.00	PJ	1.00000
3	283484100	1.00	2.00	PJ	0.00833	0.01670	PJ	9271.00	18542.00	PJ	1.00000
3	283486500	1.00	2.00	PJ	0.00833	0.01670	PJ	9271.00	18542.00	PJ	1.00000
3	283487100	1.00	2.00	PJ	0.00833	0.01670	PJ	9271.00	18542.00	PJ	1.00000
3	284112100	56.70	113.40	PJ	0.33000	0.66000	PJ	73000.00	146000.00	PJ	1.00000
3	284112300	28.35	56.70	PJ	0.33000	0.66000	PJ	73000.00	146000.00	PJ	1.00000
3	284112500	10.00	20.00	PJ	0.03000	0.07000	PJ	86870.00	173740.00	PJ	1.00000
3	284112600	5.00	10.00	PJ	0.03000	0.07000	PJ	86870.00	173740.00	PJ	1.00000
3	284112800	5.00	10.00	PJ	0.03000	0.07000	PJ	86870.00	173740.00	PJ	1.00000
3	284114000	100.00	200.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284114100	100.00	200.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284114300	100.00	200.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284114600	200.00	400.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284114900	200.00	400.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284116000	10.00	20.00	PJ	0.03000	0.07000	PJ	2920.00	5840.00	PJ	1.00000
3	284117700	10.00	20.00	PJ	0.03000	0.07000	PJ	2920.00	5840.00	PJ	1.00000
3	284117800	5.00	10.00	PJ	0.03000	0.07000	PJ	2920.00	5840.00	PJ	1.00000
3	284120100	56.70	113.40	PJ	0.33000	0.66000	PJ	73000.00	146000.00	PJ	1.00000
3	284120300	28.35	56.70	PJ	0.33000	0.66000	PJ	73000.00	146000.00	PJ	1.00000
3	284120400	5.00	10.00	PJ	0.03000	0.07000	PJ	86870.00	173740.00	PJ	1.00000
3	284120500	5.00	10.00	PJ	0.03000	0.07000	PJ	86870.00	173740.00	PJ	1.00000
3	284120600	2.00	4.00	PJ	0.03000	0.07000	PJ	86870.00	173740.00	PJ	1.00000
3	284120900	5.00	10.00	PJ	0.03000	0.07000	PJ	86870.00	173740.00	PJ	1.00000
3	284121100	5.00	10.00	PJ	0.03000	0.07000	PJ	86870.00	173740.00	PJ	1.00000
3	284122000	100.00	200.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284122100	100.00	200.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284122400	100.00	200.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284122600	100.00	200.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284123000	200.00	400.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284123100	200.00	400.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284123500	200.00	400.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284126100	100.00	200.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
3	284130000	0.25	0.50	PJ	0.01000	0.02000	PJ	554800.00	1109600.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
3	284131200	0.25	0.50	PJ	0.01000	0.02000	PJ	554800.00	1109600.00	PJ	1.00000
3	284131300	0.25	0.50	PJ	0.01000	0.02000	PJ	554800.00	1109600.00	PJ	1.00000
3	284131400	0.25	0.50	PJ	0.01000	0.02000	PJ	554800.00	1109600.00	PJ	1.00000
3	284131500	2.00	4.00	PJ	0.01000	0.02000	PJ	554800.00	1109600.00	PJ	1.00000
3	284139800	1.00	2.00	PJ	0.01000	0.02000	PJ	554800.00	1109600.00	PJ	1.00000
3	284220000	50.00	100.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284224300	50.00	100.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284225300	50.00	100.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
3	284231100	0.50	1.00	PJ	0.02000	0.03000	PJ	63875.00	127750.00	PJ	1.00000
3	284232100	453.60	907.20	PJ	0.50000	1.00000	PJ	520.00	1040.00	PJ	1.00000
3	284232600	12.00	24.00	PJ	0.08000	0.17000	PJ	5980.00	11960.00	PJ	1.00000
3	284232800	907.20	1814.40	PJ	0.01000	0.02000	PJ	6396.00	12792.00	PJ	1.00000
3	284233000	5.00	10.00	PJ	0.08000	0.17000	PJ	86870.00	173740.00	PJ	1.00000
3	284233200	0.50	1.00	PJ	0.01000	0.02000	PJ	365000.00	730000.00	PJ	1.00000
3	284234100	15.00	30.00	PJ	0.33300	0.66700	PJ	36500.00	73000.00	PJ	1.00000
3	284234400	30.00	60.00	PJ	0.33300	0.66700	PJ	36500.00	73000.00	PJ	1.00000
3	284234600	15.00	30.00	PJ	0.33300	0.66700	PJ	36500.00	73000.00	PJ	1.00000
3	284234800	1.00	2.00	PJ	0.02000	0.03000	PJ	3650.00	7300.00	PJ	1.00000
3	284234900	1.80	3.60	PJ	0.02000	0.03000	PJ	5216.00	10432.00	PJ	1.00000
3	284235000	3782.00	7564.00	PJ	1.00000	2.00000	PJ	120.00	240.00	PJ	1.00000
3	284235100	3782.00	7564.00	PJ	1.00000	2.00000	PJ	120.00	240.00	PJ	1.00000
3	284235300	3782.00	7564.00	PJ	1.00000	2.00000	PJ	120.00	240.00	PJ	1.00000
3	284237100	5.00	10.00	PJ	0.02000	0.03000	PJ	365.00	730.00	PJ	1.00000
3	284238100	5.00	10.00	PJ	0.01670	0.03300	PJ	3650.00	7300.00	PJ	1.00000
3	284238500	56.70	113.40	PJ	720.00000	1440.00000	PJ	1380.00	2760.00	PJ	1.00000
3	284239700	4.00	8.00	PJ	0.02000	0.03000	PJ	21900.00	43800.00	PJ	1.00000
3	284241500	1.00	2.00	PJ	0.00500	0.01000	PJ	5200.00	10400.00	PJ	1.00000
3	284242000	907.00	1814.00	PJ	2.00000	4.00000	PJ	156.00	312.00	PJ	1.00000
3	284242100	907.00	1814.00	PJ	2.00000	4.00000	PJ	156.00	312.00	PJ	1.00000
3	284242300	907.00	1814.00	PJ	2.00000	4.00000	PJ	156.00	312.00	PJ	1.00000
3	284242500	1200.00	2400.00	PJ	2.00000	4.00000	PJ	156.00	312.00	PJ	1.00000
3	284246300	56.70	113.40	PJ	0.08000	0.17000	PJ	600.00	1200.00	PJ	1.00000
3	284249800	1.73	3.46	PJ	0.08000	0.17000	PJ	182500.00	365000.00	PJ	1.00000
3	284300000	186.50	373.00	PJ	0.50000	1.00000	PJ	600.00	1200.00	PJ	1.00000
3	284303100	186.50	373.00	PJ	0.50000	1.00000	PJ	600.00	1200.00	PJ	1.00000
3	284400000	0.23	0.46	PJ	0.08000	0.17000	PJ	45659.00	91318.00	PJ	1.00000
3	284431500	16.40	32.80	PJ	0.05000	0.10000	PJ	45659.00	91318.00	PJ	1.00000
3	284431800	12.40	24.80	PJ	0.05000	0.10000	PJ	45659.00	91318.00	PJ	1.00000
3	284432200	2.85	5.70	PJ	0.05000	0.10000	PJ	22829.50	45659.00	PJ	1.00000
3	284432600	5.00	10.00	PJ	0.03000	0.07000	PJ	20353.00	40706.00	PJ	1.00000
3	284433900	101.00	202.00	PJ	0.75000	1.50000	PJ	0.64	1.27	PJ	1.00000
3	284434100	10.00	20.00	PJ	0.03000	0.07000	PJ	3643.00	7285.00	PJ	1.00000
3	284435100	227.00	554.00	PJ	0.75000	1.50000	PJ	0.64	1.27	PJ	1.00000
3	284436300	5.00	10.00	PJ	0.00500	0.01000	PJ	21515.00	43030.00	PJ	1.00000
3	284436400	10.00	20.00	PJ	0.00500	0.01000	PJ	21515.00	43030.00	PJ	1.00000
3	284436500	12.70	25.40	PJ	0.03000	0.07000	PJ	0.64	1.27	PJ	1.00000
3	284439500	227.00	554.00	PJ	0.75000	1.50000	PJ	0.64	1.27	PJ	1.00000
3	284442100	1.00	2.00	PJ	0.01670	0.03300	PJ	92710.00	185420.00	PJ	1.00000
3	284443100	1.00	2.00	PJ	0.01670	0.03300	PJ	1320.00	2640.00	PJ	1.00000
3	284449800	2.60	5.20	PJ	0.01670	0.03300	PJ	13900.00	27800.00	PJ	1.00000
3	284473100	0.50	1.00	PJ	0.00417	0.00833	PJ	72075.00	144150.00	PJ	1.00000
3	284477500	5.00	10.00	PJ	0.01670	0.03300	PJ	13900.00	27800.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
3	285100000	436.00	872.00	PJ	0.20000	0.40000	PJ	1.00	2.00	PJ	1.00000
3	285110000	436.00	872.00	PJ	0.20000	0.40000	PJ	1.00	2.00	PJ	1.00000
3	285113700	0.00	0.00	PJ	0.00000	0.00000	PJ	0.00	0.00	PJ	1.00000
3	285116000	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
3	285116500	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
3	285116900	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
3	285117100	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
3	285117500	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
3	285117700	94540.00	189080.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
3	285118100	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
3	285118300	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
3	285118600	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
3	285118800	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
3	285126700	94540.00	189080.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
3	285133100	189079.00	378158.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
3	285150000	436.00	872.00	PJ	0.20000	0.40000	PJ	1.00	2.00	PJ	1.00000
3	285152300	7568.00	15136.00	PJ	4.00000	8.00000	PJ	1.00	2.00	PJ	1.00000
3	285153100	7568.00	15136.00	PJ	4.00000	8.00000	PJ	1.00	2.00	PJ	1.00000
3	285159800	436.00	872.00	PJ	0.20000	0.40000	PJ	1.00	2.00	PJ	1.00000
3	287990000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
3	287991000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
3	287991200	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
3	287992000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
3	287993000	56.70	113.40	PJ	720.00000	1440.00000	PJ	240.00	480.00	PJ	1.00000
3	287997100	185.00	370.00	PJ	168.00000	168.00000	PJ	48.00	96.00	PJ	1.00000
3	289135500	28.40	56.80	PJ	0.17000	0.33000	PJ	34840.00	69680.00	PJ	1.00000
3	289140000	28.40	56.80	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289141100	28.40	56.80	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289142400	28.40	56.80	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289143300	28.40	56.80	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289144100	28.40	56.80	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289144800	28.40	56.80	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289145300	28.40	56.80	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289145400	5.00	10.00	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289145700	28.40	56.80	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289146500	28.40	56.80	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289147100	28.40	56.80	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289149900	28.40	56.80	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289162500	28.40	56.80	PJ	0.17000	0.33000	PJ	3120.00	6240.00	PJ	1.00000
3	289170000	151.10	299.30	PJ	0.25000	0.50000	PJ	3120.00	6240.00	PJ	1.00000
3	289171100	151.10	299.30	PJ	0.25000	0.50000	PJ	3120.00	6240.00	PJ	1.00000
3	289172100	151.10	299.30	PJ	0.25000	0.50000	PJ	3120.00	6240.00	PJ	1.00000
3	289173100	151.10	299.30	PJ	0.25000	0.50000	PJ	3120.00	6240.00	PJ	1.00000
3	289174600	151.10	299.30	PJ	0.25000	0.50000	PJ	3120.00	6240.00	PJ	1.00000
3	289177100	151.10	299.30	PJ	0.25000	0.50000	PJ	3120.00	6240.00	PJ	1.00000
3	289954300	85.00	170.00	PJ	0.17000	0.33000	PJ	20.00	40.00	PJ	1.00000
3	289959700	56.70	113.40	PJ	0.25000	0.50000	PJ	3120.00	6240.00	PJ	1.00000
3	2911D5700	7568.00	15136.00	PJ	4.00000	8.00000	PJ	1.00	2.00	PJ	1.00000
3	299202100	50.10	93.30	PJ	0.13330	0.25000	PJ	3120.00	6240.00	PJ	1.00000
3	299203100	50.10	93.30	PJ	0.13330	0.25000	PJ	3120.00	6240.00	PJ	1.00000
3	329189000	50.00	100.00	PJ	0.25000	0.50000	PJ	50.00	100.00	PJ	1.00000
3	395120600	0.25	0.50	PJ	0.25000	0.50000	PJ	278200.00	556400.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
4	207910000	2.00	4.00	PJ	0.00800	0.01700	PJ	1825.00	3650.00	PJ	1.00000
4	281991500	114.00	228.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	281994000	228.00	556.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	283400000	1.00	2.00	PJ	0.01670	0.03300	PJ	31025.00	62050.00	PJ	1.00000
4	283411500	0.50	1.00	PJ	0.00800	0.01670	PJ	6205.00	12410.00	PJ	1.00000
4	283429000	1.00	2.00	PJ	0.00800	0.01670	PJ	6205.00	12410.00	PJ	1.00000
4	283445000	1.00	2.00	PJ	0.00800	0.01670	PJ	6205.00	12410.00	PJ	1.00000
4	283445100	1.00	2.00	PJ	0.00800	0.01670	PJ	6205.00	12410.00	PJ	1.00000
4	283452000	1.00	2.00	PJ	0.00800	0.01670	PJ	6205.00	12410.00	PJ	1.00000
4	283452900	50.00	100.00	PJ	0.00800	0.01670	PJ	6205.00	12410.00	PJ	1.00000
4	283458300	5.00	10.00	PJ	0.00800	0.01670	PJ	6205.00	12410.00	PJ	1.00000
4	283459800	1.00	2.00	PJ	0.00800	0.01670	PJ	6205.00	12410.00	PJ	1.00000
4	283461100	10.00	20.00	PJ	0.01670	0.03300	PJ	6205.00	12410.00	PJ	1.00000
4	283461600	10.00	20.00	PJ	0.01670	0.03300	PJ	6205.00	12410.00	PJ	1.00000
4	283461800	10.00	20.00	PJ	0.01670	0.03300	PJ	6205.00	12410.00	PJ	1.00000
4	283461900	10.00	20.00	PJ	0.01670	0.03300	PJ	6205.00	12410.00	PJ	1.00000
4	283462100	1.00	2.00	PJ	0.00833	0.01670	PJ	6205.00	12410.00	PJ	1.00000
4	283463000	10.00	20.00	PJ	0.01670	0.03300	PJ	6205.00	12410.00	PJ	1.00000
4	283463100	10.00	20.00	PJ	0.01670	0.03300	PJ	6205.00	12410.00	PJ	1.00000
4	283463500	10.00	20.00	PJ	0.01670	0.03300	PJ	6205.00	12410.00	PJ	1.00000
4	283463700	10.00	20.00	PJ	0.01670	0.03300	PJ	6205.00	12410.00	PJ	1.00000
4	283463900	10.00	20.00	PJ	0.01670	0.03300	PJ	6205.00	12410.00	PJ	1.00000
4	283469800	10.00	20.00	PJ	0.01670	0.03300	PJ	6205.00	12410.00	PJ	1.00000
4	283484100	1.00	2.00	PJ	0.00833	0.01670	PJ	6205.00	12410.00	PJ	1.00000
4	283486500	1.00	2.00	PJ	0.00833	0.01670	PJ	6205.00	12410.00	PJ	1.00000
4	283487100	1.00	2.00	PJ	0.00833	0.01670	PJ	6205.00	12410.00	PJ	1.00000
4	284112100	56.70	113.40	PJ	0.33000	0.66000	PJ	2190.00	4380.00	PJ	1.00000
4	284112300	28.35	56.70	PJ	0.33000	0.66000	PJ	2190.00	4380.00	PJ	1.00000
4	284112500	10.00	20.00	PJ	0.03000	0.07000	PJ	38690.00	77380.00	PJ	1.00000
4	284112600	5.00	10.00	PJ	0.03000	0.07000	PJ	38690.00	77380.00	PJ	1.00000
4	284112800	5.00	10.00	PJ	0.03000	0.07000	PJ	38690.00	77380.00	PJ	1.00000
4	284114000	100.00	200.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284114100	100.00	200.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284114300	100.00	200.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284114600	200.00	400.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284114900	200.00	400.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284116000	10.00	20.00	PJ	0.03000	0.07000	PJ	2190.00	4380.00	PJ	1.00000
4	284117700	10.00	20.00	PJ	0.03000	0.07000	PJ	2190.00	4380.00	PJ	1.00000
4	284117800	5.00	10.00	PJ	0.03000	0.07000	PJ	2190.00	4380.00	PJ	1.00000
4	284120100	56.70	113.40	PJ	0.33000	0.66000	PJ	2190.00	4380.00	PJ	1.00000
4	284120300	28.35	56.70	PJ	0.33000	0.66000	PJ	2190.00	4380.00	PJ	1.00000
4	284120400	5.00	10.00	PJ	0.03000	0.07000	PJ	38690.00	77380.00	PJ	1.00000
4	284120500	5.00	10.00	PJ	0.03000	0.07000	PJ	38690.00	77380.00	PJ	1.00000
4	284120600	2.00	4.00	PJ	0.03000	0.07000	PJ	38690.00	77380.00	PJ	1.00000
4	284120900	5.00	10.00	PJ	0.03000	0.07000	PJ	38690.00	77380.00	PJ	1.00000
4	284121100	5.00	10.00	PJ	0.03000	0.07000	PJ	38690.00	77380.00	PJ	1.00000
4	284122000	100.00	200.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284122100	100.00	200.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284122400	100.00	200.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284122600	100.00	200.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284123000	200.00	400.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284123100	200.00	400.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
4	284123500	200.00	400.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284126100	100.00	200.00	PJ	0.02000	0.03000	PJ	4562.50	9125.00	PJ	1.00000
4	284130000	0.25	0.50	PJ	0.01000	0.02000	PJ	1635.00	3270.00	PJ	1.00000
4	284131200	0.25	0.50	PJ	0.01000	0.02000	PJ	1635.00	3270.00	PJ	1.00000
4	284131300	0.25	0.50	PJ	0.01000	0.02000	PJ	1635.00	3270.00	PJ	1.00000
4	284131400	0.25	0.50	PJ	0.01000	0.02000	PJ	1635.00	3270.00	PJ	1.00000
4	284131500	2.00	4.00	PJ	0.01000	0.02000	PJ	1635.00	3270.00	PJ	1.00000
4	284139800	1.00	2.00	PJ	0.01000	0.02000	PJ	1635.00	3270.00	PJ	1.00000
4	284220000	50.00	100.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284224300	50.00	100.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284225300	50.00	100.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
4	284231100	0.50	1.00	PJ	0.02000	0.03000	PJ	2676.00	5352.00	PJ	1.00000
4	284232100	453.60	907.20	PJ	0.50000	1.00000	PJ	208.00	416.00	PJ	1.00000
4	284232600	12.00	24.00	PJ	0.08000	0.17000	PJ	6500.00	13000.00	PJ	1.00000
4	284232800	907.20	1814.40	PJ	0.01000	0.02000	PJ	672.00	1344.00	PJ	1.00000
4	284233000	5.00	10.00	PJ	0.08000	0.17000	PJ	38690.00	77380.00	PJ	1.00000
4	284233200	0.50	1.00	PJ	0.01000	0.02000	PJ	18615.00	37230.00	PJ	1.00000
4	284234100	15.00	30.00	PJ	0.33300	0.66700	PJ	9125.00	18250.00	PJ	1.00000
4	284234400	30.00	60.00	PJ	0.33300	0.66700	PJ	9125.00	18250.00	PJ	1.00000
4	284234600	15.00	30.00	PJ	0.33300	0.66700	PJ	9125.00	18250.00	PJ	1.00000
4	284234800	1.00	2.00	PJ	0.02000	0.03000	PJ	36500.00	73000.00	PJ	1.00000
4	284234900	1.80	3.60	PJ	0.02000	0.03000	PJ	650.00	1300.00	PJ	1.00000
4	284235000	3782.00	7564.00	PJ	1.00000	2.00000	PJ	1200.00	2400.00	PJ	1.00000
4	284235100	3782.00	7564.00	PJ	1.00000	2.00000	PJ	1200.00	2400.00	PJ	1.00000
4	284235300	3782.00	7564.00	PJ	1.00000	2.00000	PJ	1200.00	2400.00	PJ	1.00000
4	284237100	5.00	10.00	PJ	0.02000	0.03000	PJ	52.00	156.00	PJ	1.00000
4	284238100	5.00	10.00	PJ	0.01670	0.03300	PJ	365.00	1095.00	PJ	1.00000
4	284238500	56.70	113.40	PJ	720.00000	1440.00000	PJ	600.00	1200.00	PJ	1.00000
4	284239700	4.00	8.00	PJ	0.02000	0.03000	PJ	3900.00	7800.00	PJ	1.00000
4	284241500	1.00	2.00	PJ	0.00500	0.01000	PJ	5200.00	10400.00	PJ	1.00000
4	284242000	907.00	1814.00	PJ	2.00000	4.00000	PJ	2600.00	5200.00	PJ	1.00000
4	284242100	907.00	1814.00	PJ	2.00000	4.00000	PJ	2600.00	5200.00	PJ	1.00000
4	284242300	907.00	1814.00	PJ	2.00000	4.00000	PJ	2600.00	5200.00	PJ	1.00000
4	284242500	1200.00	2400.00	PJ	2.00000	4.00000	PJ	2600.00	5200.00	PJ	1.00000
4	284244300	74.30	179.00	PJ	0.08000	0.17000	PJ	510.00	1020.00	PJ	1.00000
4	284246300	56.70	113.40	PJ	0.08000	0.17000	PJ	180.00	360.00	PJ	1.00000
4	284249800	1.73	3.46	PJ	0.08000	0.17000	PJ	5475.00	10950.00	PJ	1.00000
4	284300000	186.50	373.00	PJ	0.50000	1.00000	PJ	50.00	100.00	PJ	1.00000
4	284303100	186.50	373.00	PJ	0.50000	1.00000	PJ	50.00	100.00	PJ	1.00000
4	284400000	0.23	0.46	PJ	0.01000	0.01000	PJ	15512.50	31025.00	PJ	1.00000
4	284414900	1.73	3.46	PJ	0.05000	0.10000	PJ	6630.00	13260.00	PJ	1.00000
4	284421100	0.23	0.46	PJ	0.01000	0.01000	PJ	15512.50	31025.00	PJ	1.00000
4	284422300	0.23	0.46	PJ	0.01000	0.01000	PJ	15512.50	31025.00	PJ	1.00000
4	284423500	0.23	0.46	PJ	0.01000	0.01000	PJ	15512.50	31025.00	PJ	1.00000
4	284424500	0.23	0.46	PJ	0.01000	0.01000	PJ	15512.50	31025.00	PJ	1.00000
4	284431500	16.40	32.80	PJ	0.05000	0.10000	PJ	16575.00	33150.00	PJ	1.00000
4	284431800	12.40	24.80	PJ	0.05000	0.10000	PJ	16575.00	33150.00	PJ	1.00000
4	284432200	2.85	5.70	PJ	0.05000	0.10000	PJ	2210.00	4420.00	PJ	1.00000
4	284432600	5.00	10.00	PJ	0.03000	0.07000	PJ	552.50	1105.00	PJ	1.00000
4	284433900	101.00	202.00	PJ	0.75000	1.50000	PJ	25.50	51.00	PJ	1.00000
4	284434100	10.00	20.00	PJ	0.03000	0.07000	PJ	552.50	1105.00	PJ	1.00000
4	284435100	227.00	554.00	PJ	0.75000	1.50000	PJ	127.50	255.00	PJ	1.00000



Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
4	284436300	5.00	10.00	PJ	0.00500	0.01000	PJ	2762.50	5525.00	PJ	1.00000
4	284436400	10.00	20.00	PJ	0.00500	0.01000	PJ	2762.50	5525.00	PJ	1.00000
4	284436500	12.70	25.40	PJ	0.03000	0.07000	PJ	127.50	255.00	PJ	1.00000
4	284439500	227.00	554.00	PJ	0.75000	1.50000	PJ	25.50	51.00	PJ	1.00000
4	284442100	1.00	2.00	PJ	0.01670	0.03300	PJ	62050.00	124100.00	PJ	1.00000
4	284443100	1.00	2.00	PJ	0.01670	0.03300	PJ	1768.00	3536.00	PJ	1.00000
4	284449800	2.60	5.20	PJ	0.01670	0.03300	PJ	9308.00	18616.00	PJ	1.00000
4	284473100	0.50	1.00	PJ	0.00417	0.00833	PJ	22100.00	44200.00	PJ	1.00000
4	284477500	5.00	10.00	PJ	0.01670	0.03300	PJ	9310.00	18620.00	PJ	1.00000
4	285100000	436.00	872.00	PJ	0.20000	0.40000	PJ	1.00	2.00	PJ	1.00000
4	285110000	436.00	872.00	PJ	0.20000	0.40000	PJ	1.00	2.00	PJ	1.00000
4	285113700	0.00	0.00	PJ	0.00000	0.00000	PJ	0.00	0.00	PJ	1.00000
4	285116000	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
4	285116500	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
4	285116900	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
4	285117100	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
4	285117500	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
4	285117700	94540.00	189079.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
4	285118100	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
4	285118300	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
4	285118600	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
4	285118800	378158.00	756316.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
4	285126700	94540.00	189079.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
4	285133100	47270.00	94540.00	PJ	96.00000	192.00000	PJ	1.00	2.00	PJ	1.00000
4	285150000	436.00	872.00	PJ	0.20000	0.40000	PJ	1.00	2.00	PJ	1.00000
4	285152300	7568.00	15136.00	PJ	4.00000	8.00000	PJ	1.00	2.00	PJ	1.00000
4	285153100	7568.00	15136.00	PJ	4.00000	8.00000	PJ	1.00	2.00	PJ	1.00000
4	285159800	436.00	872.00	PJ	0.20000	0.40000	PJ	1.00	2.00	PJ	1.00000
4	287990000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
4	287991000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
4	287991200	185.00	370.00	PJ	1.00000	2.00000	PJ	12.00	24.00	PJ	1.00000
4	287992000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
4	287993000	56.70	113.40	PJ	720.00000	1440.00000	PJ	240.00	480.00	PJ	1.00000
4	287997100	185.00	370.00	PJ	168.00000	168.00000	PJ	48.00	96.00	PJ	1.00000
4	289135500	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289140000	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289141100	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289142400	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289143300	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289144100	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289144800	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289145300	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289145400	5.00	10.00	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289145700	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289146500	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289147100	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289149900	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289162500	28.40	56.80	PJ	0.17000	0.33000	PJ	4562.00	9124.00	PJ	1.00000
4	289170000	151.10	299.30	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
4	289171100	151.10	299.30	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
4	289172100	151.10	299.30	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
4	289173100	151.10	299.30	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
4	289174600	151.10	299.30	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
4	289177100	151.10	299.30	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
4	289954300	85.00	170.00	PJ	0.17000	0.33000	PJ	2.00	4.00	PJ	1.00000
4	289959700	56.70	113.40	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
4	2911D5700	7568.00	15136.00	PJ	4.00000	8.00000	PJ	1.00	2.00	PJ	1.00000
4	299202100	50.10	93.30	PJ	0.13330	0.25000	PJ	312.00	624.00	PJ	1.00000
4	299203100	50.10	93.30	PJ	0.13330	0.25000	PJ	312.00	624.00	PJ	1.00000
4	329189000	50.00	100.00	PJ	0.25000	0.50000	PJ	50.00	100.00	PJ	1.00000
4	395120600	0.25	0.50	PJ	0.25000	0.50000	PJ	26000.00	52000.00	PJ	1.00000
5	284112500	10.00	20.00	PJ	0.03000	0.07000	PJ	2000.00	4000.00	PJ	1.00000
5	284112600	5.00	10.00	PJ	0.02000	0.03000	PJ	4160.00	8320.00	PJ	1.00000
5	284112800	5.00	10.00	PJ	0.03000	0.07000	PJ	260.00	580.00	PJ	1.00000
5	284117700	10.00	20.00	PJ	0.03000	0.07000	PJ	1040.00	2080.00	PJ	1.00000
5	284117800	5.00	10.00	PJ	0.03000	0.07000	PJ	1040.00	2080.00	PJ	1.00000
5	284120400	5.00	10.00	PJ	0.03000	0.07000	PJ	3120.00	6240.00	PJ	1.00000
5	284120500	5.00	10.00	PJ	0.03000	0.07000	PJ	3120.00	6240.00	PJ	1.00000
5	284120600	2.00	4.00	PJ	0.02000	0.03000	PJ	4160.00	8320.00	PJ	1.00000
5	284120900	5.00	10.00	PJ	0.03000	0.07000	PJ	4160.00	8320.00	PJ	1.00000
5	284121100	5.00	10.00	PJ	0.03000	0.07000	PJ	4160.00	8320.00	PJ	1.00000
5	284130000	0.25	0.50	PJ	0.02000	0.03000	PJ	68640.00	137280.00	PJ	1.00000
5	284131300	0.25	0.50	PJ	0.02000	0.03000	PJ	68640.00	137280.00	PJ	1.00000
5	284139800	1.00	2.00	PJ	0.01000	0.02000	PJ	68640.00	137280.00	PJ	1.00000
5	284230000	4.00	8.00	PJ	0.10000	0.33000	PJ	3900.00	7800.00	PJ	1.00000
5	284231100	0.50	1.00	PJ	0.02000	0.03000	PJ	132.00	264.00	PJ	1.00000
5	284232600	12.00	24.00	PJ	0.08000	0.17000	PJ	2080.00	4160.00	PJ	1.00000
5	284232800	907.20	1814.40	PJ	0.01000	0.02000	PJ	69.30	138.66	PJ	1.00000
5	284233000	5.00	10.00	PJ	0.08000	0.17000	PJ	3120.00	6240.00	PJ	1.00000
5	284233200	0.50	1.00	PJ	0.01000	0.02000	PJ	4160.00	8320.00	PJ	1.00000
5	284235000	3782.00	7564.00	PJ	1.00000	2.00000	PJ	72.00	144.00	PJ	1.00000
5	284235100	3782.00	7564.00	PJ	1.00000	2.00000	PJ	72.00	144.00	PJ	1.00000
5	284235300	3782.00	7564.00	PJ	1.00000	2.00000	PJ	72.00	144.00	PJ	1.00000
5	284237100	5.00	10.00	PJ	0.02000	0.03000	PJ	52.00	156.00	PJ	1.00000
5	284238100	5.00	10.00	PJ	0.01670	0.03300	PJ	365.00	1095.00	PJ	1.00000
5	284238500	56.70	113.40	PJ	720.00000	1440.00000	PJ	48.00	96.00	PJ	1.00000
5	284239700	28.34	56.70	PJ	0.02000	0.03000	PJ	3900.00	7800.00	PJ	1.00000
5	284241500	1.00	2.00	PJ	0.00500	0.01000	PJ	3120.00	6240.00	PJ	1.00000
5	284242000	907.00	1814.00	PJ	2.00000	4.00000	PJ	72.00	144.00	PJ	1.00000
5	284242100	907.00	1814.00	PJ	2.00000	4.00000	PJ	72.00	144.00	PJ	1.00000
5	284242300	907.00	1814.00	PJ	2.00000	4.00000	PJ	72.00	144.00	PJ	1.00000
5	284242500	1200.00	2400.00	PJ	2.00000	4.00000	PJ	72.00	144.00	PJ	1.00000
5	284246300	56.70	113.40	PJ	0.08000	0.17000	PJ	600.00	1200.00	PJ	1.00000
5	284249800	1.73	3.46	PJ	0.08000	0.17000	PJ	60.00	120.00	PJ	1.00000
5	284300000	186.50	373.00	PJ	0.50000	1.00000	PJ	60.00	120.00	PJ	1.00000
5	284477500	5.00	10.00	PJ	0.01670	0.03300	PJ	858.00	1716.00	PJ	1.00000
5	285100000	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
5	285110000	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
5	285113700	0.00	0.00	PJ	0.00000	0.00000	PJ	0.00	0.00	PJ	1.00000
5	285116000	93540.00	187079.00	PJ	24.00000	48.00000	PJ	1.50	3.00	PJ	1.00000
5	285116500	93540.00	187079.00	PJ	24.00000	48.00000	PJ	1.50	3.00	PJ	1.00000
5	285116900	93540.00	187080.00	PJ	24.00000	48.00000	PJ	1.50	3.00	PJ	1.00000
5	285117100	93540.00	187079.00	PJ	24.00000	48.00000	PJ	1.50	3.00	PJ	1.00000
5	285117500	93540.00	187079.00	PJ	24.00000	48.00000	PJ	1.50	3.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
5	285117700	23385.00	46770.00	PJ	24.00000	48.00000	PJ	1.50	3.00	PJ	1.00000
5	285118100	93540.00	187079.00	PJ	24.00000	48.00000	PJ	1.50	3.00	PJ	1.00000
5	285118300	93540.00	187079.00	PJ	24.00000	48.00000	PJ	1.50	3.00	PJ	1.00000
5	285118600	93540.00	187079.00	PJ	24.00000	48.00000	PJ	1.50	3.00	PJ	1.00000
5	285118800	93540.00	187079.00	PJ	24.00000	48.00000	PJ	1.50	3.00	PJ	1.00000
5	285126700	10.00	20.00	PJ	0.03000	0.07000	PJ	520.00	1040.00	PJ	1.00000
5	285133100	46770.00	93540.00	PJ	24.00000	48.00000	PJ	1.50	3.00	PJ	1.00000
5	285150000	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
5	285152300	1871.00	3742.00	PJ	1.00000	2.00000	PJ	1.50	3.00	PJ	1.00000
5	285153100	3629.00	7257.00	PJ	1.00000	2.00000	PJ	1.50	3.00	PJ	1.00000
5	285159800	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
5	287990000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
5	287991000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
5	287991200	185.00	370.00	PJ	1.00000	2.00000	PJ	16.00	32.00	PJ	1.00000
5	287992000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
5	287997100	185.00	370.00	PJ	168.00000	168.00000	PJ	48.00	96.00	PJ	1.00000
5	289135500	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289140000	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289141100	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289142400	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289143300	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289144100	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289144800	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289145300	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289145400	5.00	10.00	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289145700	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289146500	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289147100	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289149900	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289162500	28.40	56.80	PJ	0.17000	0.33000	PJ	858.00	1716.00	PJ	1.00000
5	289170000	151.10	299.30	PJ	0.25000	0.50000	PJ	52.00	104.00	PJ	1.00000
5	289171100	151.10	299.30	PJ	0.25000	0.50000	PJ	52.00	104.00	PJ	1.00000
5	289172100	151.10	299.30	PJ	0.25000	0.50000	PJ	52.00	104.00	PJ	1.00000
5	289173100	151.10	299.30	PJ	0.25000	0.50000	PJ	52.00	104.00	PJ	1.00000
5	289174600	151.10	299.30	PJ	0.25000	0.50000	PJ	52.00	104.00	PJ	1.00000
5	289177100	151.10	299.30	PJ	0.25000	0.50000	PJ	52.00	104.00	PJ	1.00000
5	289957200	5.00	10.00	PJ	0.25000	0.50000	PJ	260.00	520.00	PJ	1.00000
5	289959700	56.70	113.40	PJ	0.25000	0.50000	PJ	156.00	312.00	PJ	1.00000
5	2911D5700	3629.00	7257.00	PJ	1.00000	2.00000	PJ	1.50	3.00	PJ	1.00000
5	299202100	50.10	93.30	PJ	0.13330	0.25000	PJ	156.00	312.00	PJ	1.00000
5	299203100	50.10	93.30	PJ	0.13330	0.25000	PJ	156.00	312.00	PJ	1.00000
5	395110200	0.25	0.50	PJ	0.25000	0.50000	PJ	66000.00	132000.00	PJ	1.00000
5	395120000	0.25	0.50	PJ	0.25000	0.50000	PJ	34320.00	68640.00	PJ	1.00000
5	395120600	0.25	0.50	PJ	0.25000	0.50000	PJ	34320.00	68640.00	PJ	1.00000
5	395241900	10.00	20.00	PJ	0.25000	0.50000	PJ	1040.00	2080.00	PJ	1.00000
6	284112500	10.00	20.00	PJ	0.03000	0.07000	PJ	2000.00	4000.00	PJ	1.00000
6	284112600	5.00	10.00	PJ	0.03000	0.07000	PJ	2000.00	4000.00	PJ	1.00000
6	284112800	5.00	10.00	PJ	0.03000	0.07000	PJ	2000.00	4000.00	PJ	1.00000
6	284117700	10.00	20.00	PJ	0.03000	0.07000	PJ	1095.00	2190.00	PJ	1.00000
6	284117800	5.00	10.00	PJ	0.03000	0.07000	PJ	1095.00	2190.00	PJ	1.00000
6	284120400	5.00	10.00	PJ	0.03000	0.07000	PJ	2000.00	4000.00	PJ	1.00000
6	284120500	5.00	10.00	PJ	0.03000	0.07000	PJ	2000.00	4000.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
6	284120600	2.00	4.00	PJ	0.03000	0.07000	PJ	2000.00	4000.00	PJ	1.00000
6	284120900	5.00	10.00	PJ	0.03000	0.07000	PJ	2000.00	4000.00	PJ	1.00000
6	284121100	5.00	10.00	PJ	0.03000	0.07000	PJ	2000.00	4000.00	PJ	1.00000
6	284130000	0.25	0.50	PJ	0.02000	0.03000	PJ	58947.50	117895.00	PJ	1.00000
6	284131300	0.25	0.50	PJ	0.02000	0.03000	PJ	58947.50	117895.00	PJ	1.00000
6	284131500	2.00	4.00	PJ	0.02000	0.03000	PJ	58947.50	117895.00	PJ	1.00000
6	284139800	1.00	2.00	PJ	0.02000	0.03000	PJ	58947.50	117895.00	PJ	1.00000
6	284231100	0.50	1.00	PJ	0.02000	0.03000	PJ	1042.00	2084.00	PJ	1.00000
6	284232600	12.00	24.00	PJ	0.08000	0.17000	PJ	1460.00	2920.00	PJ	1.00000
6	284232800	907.20	1814.40	PJ	0.01000	0.02000	PJ	208.00	416.00	PJ	1.00000
6	284233000	5.00	10.00	PJ	0.08000	0.17000	PJ	2000.00	4000.00	PJ	1.00000
6	284233200	0.50	1.00	PJ	0.01000	0.02000	PJ	3600.00	7200.00	PJ	1.00000
6	284235000	3782.00	7564.00	PJ	1.00000	2.00000	PJ	4.00	8.00	PJ	1.00000
6	284235100	3782.00	7564.00	PJ	1.00000	2.00000	PJ	4.00	8.00	PJ	1.00000
6	284235300	3782.00	7564.00	PJ	1.00000	2.00000	PJ	4.00	8.00	PJ	1.00000
6	284237100	5.00	10.00	PJ	0.02000	0.03000	PJ	52.00	156.00	PJ	1.00000
6	284238100	5.00	10.00	PJ	0.01670	0.03300	PJ	365.00	1095.00	PJ	1.00000
6	284238500	56.70	113.40	PJ	720.00000	1440.00000	PJ	24.00	48.00	PJ	1.00000
6	284239700	28.34	56.70	PJ	0.02000	0.03000	PJ	2190.00	4380.00	PJ	1.00000
6	284241500	1.00	2.00	PJ	0.00500	0.01000	PJ	3650.00	7300.00	PJ	1.00000
6	284242000	907.00	1814.00	PJ	2.00000	4.00000	PJ	52.00	104.00	PJ	1.00000
6	284242100	907.00	1814.00	PJ	2.00000	4.00000	PJ	52.00	104.00	PJ	1.00000
6	284242300	907.00	1814.00	PJ	2.00000	4.00000	PJ	52.00	104.00	PJ	1.00000
6	284242500	1200.00	2400.00	PJ	2.00000	4.00000	PJ	52.00	104.00	PJ	1.00000
6	284244300	74.30	179.00	PJ	0.08000	0.17000	PJ	4186.55	8373.10	PJ	1.00000
6	284246300	56.70	113.40	PJ	0.08000	0.17000	PJ	600.00	1200.00	PJ	1.00000
6	284249800	1.73	3.46	PJ	0.08000	0.17000	PJ	3650.00	7300.00	PJ	1.00000
6	284300000	186.50	373.00	PJ	0.50000	1.00000	PJ	3650.00	7300.00	PJ	1.00000
6	284477500	5.00	10.00	PJ	0.01670	0.03300	PJ	520.00	1040.00	PJ	1.00000
6	285100000	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
6	285110000	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
6	285113700	0.00	0.00	PJ	0.00000	0.00000	PJ	0.00	0.00	PJ	1.00000
6	285116000	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
6	285116500	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
6	285116900	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
6	285117100	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
6	285117500	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
6	285117700	47270.00	94540.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
6	285118100	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
6	285118300	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
6	285118600	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
6	285118800	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
6	285126700	47270.00	94540.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
6	285133100	47270.00	94540.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
6	285150000	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
6	285152300	3784.00	7568.00	PJ	2.00000	4.00000	PJ	1.00	2.00	PJ	1.00000
6	285153100	3784.00	7568.00	PJ	2.00000	4.00000	PJ	1.00	2.00	PJ	1.00000
6	285159800	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
6	287990000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
6	287991000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
6	287991200	185.00	370.00	PJ	1.00000	2.00000	PJ	12.00	24.00	PJ	1.00000
6	287992000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
6	287993000	56.70	113.40	PJ	720.00000	1440.00000	PJ	240.00	480.00	PJ	1.00000
6	287997100	185.00	370.00	PJ	168.00000	168.00000	PJ	48.00	96.00	PJ	1.00000
6	289135500	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289140000	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289141100	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289142400	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289143300	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289144100	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289144800	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289145300	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289145400	5.00	10.00	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289145700	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289146500	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289147100	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289149900	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289162500	28.40	56.80	PJ	0.17000	0.33000	PJ	1825.00	3650.00	PJ	1.00000
6	289170000	151.10	299.30	PJ	0.25000	0.50000	PJ	12.00	24.00	PJ	1.00000
6	289171100	151.10	299.30	PJ	0.25000	0.50000	PJ	12.00	24.00	PJ	1.00000
6	289172100	151.10	299.30	PJ	0.25000	0.50000	PJ	12.00	24.00	PJ	1.00000
6	289173100	151.10	299.30	PJ	0.25000	0.50000	PJ	12.00	24.00	PJ	1.00000
6	289174600	151.10	299.30	PJ	0.25000	0.50000	PJ	12.00	24.00	PJ	1.00000
6	289177100	151.10	299.30	PJ	0.25000	0.50000	PJ	12.00	24.00	PJ	1.00000
6	289954300	85.00	170.00	PJ	0.17000	0.33000	PJ	2.00	4.00	PJ	1.00000
6	289959700	56.70	113.40	PJ	0.25000	0.50000	PJ	156.00	312.00	PJ	1.00000
6	2911A2200	5.00	10.00	PJ	0.01670	0.03300	PJ	30.00	60.00	PJ	0.04900
6	2911D5700	3784.00	7568.00	PJ	2.00000	4.00000	PJ	1.00	2.00	PJ	1.00000
6	299202100	50.10	93.30	PJ	0.13330	0.25000	PJ	156.00	312.00	PJ	1.00000
6	299203100	50.10	93.30	PJ	0.13330	0.25000	PJ	156.00	312.00	PJ	1.00000
6	395120600	0.25	0.50	PJ	0.25000	0.50000	PJ	6240.00	6240.00	PJ	1.00000
7	202626300	100.00	200.00	PJ	0.00800	0.01700	PJ	1825.00	3650.00	PJ	1.00000
7	207910000	2.00	4.00	PJ	0.00800	0.01700	PJ	1825.00	3650.00	PJ	1.00000
7	283400000	1.00	2.00	PJ	0.01670	0.03300	PJ	140.00	280.00	PJ	1.00000
7	283411500	0.50	1.00	PJ	0.00800	0.01670	PJ	840.00	1680.00	PJ	1.00000
7	283429000	1.00	2.00	PJ	0.00800	0.01670	PJ	2520.00	5040.00	PJ	1.00000
7	283445000	1.00	2.00	PJ	0.00800	0.01670	PJ	420.00	840.00	PJ	1.00000
7	283445100	1.00	2.00	PJ	0.00800	0.01670	PJ	420.00	840.00	PJ	1.00000
7	283452000	1.00	2.00	PJ	0.00800	0.01670	PJ	840.00	1680.00	PJ	1.00000
7	283452900	50.00	100.00	PJ	0.00800	0.01670	PJ	140.00	280.00	PJ	1.00000
7	283458300	5.00	10.00	PJ	0.00800	0.01670	PJ	3640.00	7280.00	PJ	1.00000
7	283459800	1.00	2.00	PJ	0.00800	0.01670	PJ	840.00	1680.00	PJ	1.00000
7	283461100	10.00	20.00	PJ	0.01670	0.03300	PJ	840.00	1680.00	PJ	1.00000
7	283461600	10.00	20.00	PJ	0.01670	0.03300	PJ	840.00	1680.00	PJ	1.00000
7	283461800	10.00	20.00	PJ	0.01670	0.03300	PJ	840.00	1680.00	PJ	1.00000
7	283461900	10.00	20.00	PJ	0.01670	0.03300	PJ	840.00	1680.00	PJ	1.00000
7	283462100	1.00	2.00	PJ	0.00833	0.01670	PJ	840.00	1680.00	PJ	1.00000
7	283463000	10.00	20.00	PJ	0.01670	0.03300	PJ	840.00	1680.00	PJ	1.00000
7	283463100	10.00	20.00	PJ	0.01670	0.03300	PJ	840.00	1680.00	PJ	1.00000
7	283463900	10.00	20.00	PJ	0.01670	0.03300	PJ	840.00	1680.00	PJ	1.00000
7	283469800	10.00	20.00	PJ	0.01670	0.03300	PJ	840.00	1680.00	PJ	1.00000
7	283484100	1.00	2.00	PJ	0.00833	0.01670	PJ	840.00	1680.00	PJ	1.00000
7	283486500	1.00	2.00	PJ	0.00833	0.01670	PJ	840.00	1680.00	PJ	1.00000
7	283487100	1.00	2.00	PJ	0.00833	0.01670	PJ	840.00	1680.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
7	284112100	56.70	113.40	PJ	0.33000	0.66000	PJ	14600.00	29200.00	PJ	1.00000
7	284112300	28.35	56.70	PJ	0.33000	0.66000	PJ	14600.00	29200.00	PJ	1.00000
7	284112500	10.00	20.00	PJ	0.03000	0.07000	PJ	24455.00	48910.00	PJ	1.00000
7	284112600	5.00	10.00	PJ	0.03000	0.07000	PJ	24455.00	48910.00	PJ	1.00000
7	284112800	5.00	10.00	PJ	0.03000	0.07000	PJ	24455.00	48910.00	PJ	1.00000
7	284114000	100.00	200.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284114100	100.00	200.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284114300	100.00	200.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284114600	200.00	400.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284114900	200.00	400.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284116000	10.00	20.00	PJ	0.03000	0.07000	PJ	12.00	24.00	PJ	1.00000
7	284117700	10.00	20.00	PJ	0.03000	0.07000	PJ	12.00	24.00	PJ	1.00000
7	284117800	5.00	10.00	PJ	0.03000	0.07000	PJ	12.00	24.00	PJ	1.00000
7	284120100	56.70	113.40	PJ	0.33000	0.66000	PJ	14600.00	29200.00	PJ	1.00000
7	284120300	28.35	56.70	PJ	0.33000	0.66000	PJ	14600.00	29200.00	PJ	1.00000
7	284120400	5.00	10.00	PJ	0.03000	0.07000	PJ	24455.00	48910.00	PJ	1.00000
7	284120500	5.00	10.00	PJ	0.03000	0.07000	PJ	24455.00	48910.00	PJ	1.00000
7	284120600	2.00	4.00	PJ	0.03000	0.07000	PJ	24455.00	48910.00	PJ	1.00000
7	284120900	5.00	10.00	PJ	0.03000	0.07000	PJ	24455.00	48910.00	PJ	1.00000
7	284121100	5.00	10.00	PJ	0.03000	0.07000	PJ	24455.00	48910.00	PJ	1.00000
7	284122000	100.00	200.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284122100	100.00	200.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284122400	100.00	200.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284122600	100.00	200.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284123000	200.00	400.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284123100	200.00	400.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284123500	200.00	400.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284126100	100.00	200.00	PJ	0.02000	0.03000	PJ	9125.00	18250.00	PJ	1.00000
7	284130000	0.25	0.50	PJ	0.01000	0.02000	PJ	115000.00	230000.00	PJ	1.00000
7	284131200	0.25	0.50	PJ	0.01000	0.02000	PJ	115000.00	230000.00	PJ	1.00000
7	284131300	0.25	0.50	PJ	0.01000	0.02000	PJ	115000.00	230000.00	PJ	1.00000
7	284131400	0.25	0.50	PJ	0.01000	0.02000	PJ	115000.00	230000.00	PJ	1.00000
7	284131500	2.00	4.00	PJ	0.01000	0.02000	PJ	115000.00	230000.00	PJ	1.00000
7	284139800	1.00	2.00	PJ	0.01000	0.02000	PJ	25550.00	51100.00	PJ	1.00000
7	284220000	50.00	100.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284224300	50.00	100.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284225300	50.00	100.00	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284231100	0.50	1.00	PJ	0.02000	0.03000	PJ	2030.00	4060.00	PJ	1.00000
7	284232100	453.60	907.20	PJ	0.50000	1.00000	PJ	730.00	1460.00	PJ	1.00000
7	284232600	12.00	24.00	PJ	0.08000	0.17000	PJ	8030.00	16060.00	PJ	1.00000
7	284232800	907.20	1814.40	PJ	0.01000	0.02000	PJ	2184.00	4368.00	PJ	1.00000
7	284233000	5.00	10.00	PJ	0.08000	0.17000	PJ	24455.00	48910.00	PJ	1.00000
7	284233200	0.50	1.00	PJ	0.01000	0.02000	PJ	24455.00	48910.00	PJ	1.00000
7	284234100	15.00	30.00	PJ	0.33300	0.66700	PJ	18250.00	36500.00	PJ	1.00000
7	284234400	30.00	60.00	PJ	0.33300	0.66700	PJ	18250.00	36500.00	PJ	1.00000
7	284234600	15.00	30.00	PJ	0.33300	0.66700	PJ	18250.00	36500.00	PJ	1.00000
7	284234800	1.00	2.00	PJ	0.02000	0.03000	PJ	4563.00	9126.00	PJ	1.00000
7	284234900	1.80	3.60	PJ	0.02000	0.03000	PJ	18250.00	36500.00	PJ	1.00000
7	284235000	18908.00	37816.00	PJ	11.00000	22.00000	PJ	60.00	120.00	PJ	1.00000
7	284235100	18908.00	37816.00	PJ	11.00000	22.00000	PJ	60.00	120.00	PJ	1.00000
7	284235300	18908.00	37816.00	PJ	11.00000	22.00000	PJ	60.00	120.00	PJ	1.00000
7	284237100	5.00	10.00	PJ	0.02000	0.03000	PJ	52.00	156.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
7	284238100	5.00	10.00	PJ	0.01670	0.03300	PJ	365.00	1095.00	PJ	1.00000
7	284238500	56.70	113.40	PJ	720.00000	1440.00000	PJ	264.00	528.00	PJ	1.00000
7	284239700	113.00	226.00	PJ	0.02000	0.03000	PJ	5475.00	10950.00	PJ	1.00000
7	284241500	1.00	2.00	PJ	0.00500	0.01000	PJ	48545.00	97090.00	PJ	1.00000
7	284242000	907.00	1814.00	PJ	2.00000	4.00000	PJ	8030.00	16060.00	PJ	1.00000
7	284242100	907.00	1814.00	PJ	2.00000	4.00000	PJ	8030.00	16060.00	PJ	1.00000
7	284242300	907.00	1814.00	PJ	2.00000	4.00000	PJ	8030.00	16060.00	PJ	1.00000
7	284242500	1200.00	2400.00	PJ	2.00000	4.00000	PJ	8030.00	16060.00	PJ	1.00000
7	284244300	74.30	179.00	PJ	0.08000	0.17000	PJ	260.00	520.00	PJ	1.00000
7	284246300	56.70	113.40	PJ	0.08000	0.17000	PJ	3.00	6.00	PJ	1.00000
7	284249800	1.73	3.46	PJ	0.08000	0.17000	PJ	780.00	1560.00	PJ	1.00000
7	284300000	186.50	373.00	PJ	0.50000	1.00000	PJ	18250.00	36500.00	PJ	1.00000
7	284303100	186.50	373.00	PJ	0.50000	1.00000	PJ	18250.00	36500.00	PJ	1.00000
7	284400000	0.23	0.46	PJ	0.01000	0.01000	PJ	6570.00	13140.00	PJ	1.00000
7	284414900	1.73	3.46	PJ	0.05000	0.10000	PJ	3285.00	6570.00	PJ	1.00000
7	284415600	0.23	0.46	PJ	0.00167	0.00167	PJ	6570.00	13140.00	PJ	1.00000
7	284415900	0.23	0.46	PJ	0.00167	0.00167	PJ	6570.00	13140.00	PJ	1.00000
7	284420000	0.23	0.46	PJ	0.01000	0.01000	PJ	6570.00	13140.00	PJ	1.00000
7	284421100	0.23	0.46	PJ	0.01000	0.01000	PJ	6570.00	13140.00	PJ	1.00000
7	284422300	0.23	0.46	PJ	0.01000	0.01000	PJ	6570.00	13140.00	PJ	1.00000
7	284423500	0.23	0.46	PJ	0.01000	0.01000	PJ	6570.00	13140.00	PJ	1.00000
7	284424500	0.23	0.46	PJ	0.01000	0.01000	PJ	6570.00	13140.00	PJ	1.00000
7	284431000	16.40	32.80	PJ	0.05000	0.10000	PJ	6570.00	13140.00	PJ	1.00000
7	284431200	16.40	32.80	PJ	0.05000	0.10000	PJ	6570.00	13140.00	PJ	1.00000
7	284431500	16.40	32.80	PJ	0.05000	0.10000	PJ	6570.00	13140.00	PJ	1.00000
7	284431800	12.40	24.80	PJ	0.05000	0.10000	PJ	6570.00	13140.00	PJ	1.00000
7	284432200	2.85	5.70	PJ	0.05000	0.10000	PJ	3285.00	6570.00	PJ	1.00000
7	284432600	5.00	10.00	PJ	0.03000	0.07000	PJ	3285.00	6570.00	PJ	1.00000
7	284433900	101.00	202.00	PJ	0.75000	1.50000	PJ	36.40	72.80	PJ	1.00000
7	284434100	10.00	20.00	PJ	0.03000	0.07000	PJ	1820.00	3640.00	PJ	1.00000
7	284435100	227.00	554.00	PJ	0.75000	1.50000	PJ	36.40	72.80	PJ	1.00000
7	284436300	5.00	10.00	PJ	0.00500	0.01000	PJ	6570.00	13140.00	PJ	1.00000
7	284436400	10.00	20.00	PJ	0.00500	0.01000	PJ	6570.00	13140.00	PJ	1.00000
7	284436500	12.70	25.40	PJ	0.03000	0.07000	PJ	3285.00	6570.00	PJ	1.00000
7	284439500	227.00	554.00	PJ	0.75000	1.50000	PJ	36.40	72.80	PJ	1.00000
7	284442100	1.00	2.00	PJ	0.01670	0.03300	PJ	51100.00	102200.00	PJ	1.00000
7	284443100	1.00	2.00	PJ	0.01670	0.03300	PJ	728.00	1456.00	PJ	1.00000
7	284449800	2.60	5.20	PJ	0.01670	0.03300	PJ	7665.00	15330.00	PJ	1.00000
7	284461000	2.00	4.00	PJ	0.01670	0.03300	PJ	7665.00	15330.00	PJ	1.00000
7	284461100	1.70	3.40	PJ	0.01670	0.03300	PJ	7665.00	15330.00	PJ	1.00000
7	284461300	2.00	4.00	PJ	0.01670	0.03300	PJ	7665.00	15330.00	PJ	1.00000
7	284461500	2.00	4.00	PJ	0.01670	0.03300	PJ	7665.00	15330.00	PJ	1.00000
7	284461700	2.00	4.00	PJ	0.01670	0.03300	PJ	7665.00	15330.00	PJ	1.00000
7	284461900	0.54	1.08	PJ	0.01670	0.03300	PJ	7665.00	15330.00	PJ	1.00000
7	284462100	250.00	1500.00	PJ	0.01670	0.03300	PJ	6400.00	12800.00	PJ	1.00000
7	284462200	250.00	1500.00	PJ	0.01670	0.03300	PJ	6400.00	12800.00	PJ	1.00000
7	284462300	5.00	10.00	PJ	0.01670	0.03300	PJ	7665.00	15330.00	PJ	1.00000
7	284462400	5.00	10.00	PJ	0.01670	0.03300	PJ	7665.00	15330.00	PJ	1.00000
7	284462500	5.00	10.00	PJ	0.01670	0.03300	PJ	7665.00	15330.00	PJ	1.00000
7	284462600	5.00	10.00	PJ	0.01670	0.03300	PJ	7665.00	15330.00	PJ	1.00000
7	284462900	5.00	10.00	PJ	0.01670	0.03300	PJ	7665.00	15330.00	PJ	1.00000
7	284471100	1.00	2.00	PJ	0.01670	0.03300	PJ	26900.00	53800.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
7	284471500	0.01	0.02	PJ	0.01670	0.03300	PJ	0.00	20440.00	PJ	1.00000
7	284472100	1.00	2.00	PJ	0.01670	0.03300	PJ	10220.00	20440.00	PJ	1.00000
7	284472500	50.00	100.00	PJ	0.01670	0.03300	PJ	1456.00	2912.00	PJ	1.00000
7	284473100	0.50	1.00	PJ	0.00417	0.00833	PJ	25550.00	51100.00	PJ	1.00000
7	284473500	0.50	1.00	PJ	0.00417	0.00833	PJ	25550.00	51100.00	PJ	1.00000
7	284474100	0.28	0.56	PJ	0.01670	0.03300	PJ	1456.00	2912.00	PJ	1.00000
7	284474500	3.06	6.12	PJ	0.01670	0.03300	PJ	1456.00	2912.00	PJ	1.00000
7	284475100	0.48	0.96	PJ	0.01670	0.03300	PJ	1456.00	2912.00	PJ	1.00000
7	284475500	0.80	1.60	PJ	0.01670	0.03300	PJ	1456.00	2912.00	PJ	1.00000
7	284476100	5.00	10.00	PJ	0.01670	0.03300	PJ	10220.00	20440.00	PJ	1.00000
7	284476500	5.00	10.00	PJ	0.01670	0.03300	PJ	1456.00	2912.00	PJ	1.00000
7	284477100	15.10	30.20	PJ	0.01670	0.03300	PJ	10220.00	20440.00	PJ	1.00000
7	284477500	5.00	10.00	PJ	0.01670	0.03300	PJ	10220.00	20440.00	PJ	1.00000
7	284478500	110.00	220.00	PJ	0.08330	0.17000	PJ	168.00	336.00	PJ	1.00000
7	284479500	1.39	2.78	PJ	0.01670	0.03300	PJ	10220.00	20440.00	PJ	1.00000
7	285100000	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
7	285110000	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
7	285113700	0.00	0.00	PJ	0.00000	0.00000	PJ	0.00	0.00	PJ	1.00000
7	285116000	132440.00	264880.00	PJ	50.00000	100.00000	PJ	1.00	2.00	PJ	1.00000
7	285116500	132440.00	264880.00	PJ	50.00000	100.00000	PJ	1.00	2.00	PJ	1.00000
7	285116900	132440.00	264880.00	PJ	50.00000	100.00000	PJ	1.00	2.00	PJ	1.00000
7	285117100	132440.00	264880.00	PJ	50.00000	100.00000	PJ	1.00	2.00	PJ	1.00000
7	285117500	132440.00	264880.00	PJ	50.00000	100.00000	PJ	1.00	2.00	PJ	1.00000
7	285117700	33110.00	66220.00	PJ	50.00000	100.00000	PJ	1.00	2.00	PJ	1.00000
7	285118100	132440.00	264880.00	PJ	50.00000	100.00000	PJ	1.00	2.00	PJ	1.00000
7	285118300	132440.00	264880.00	PJ	50.00000	100.00000	PJ	1.00	2.00	PJ	1.00000
7	285118600	132440.00	264880.00	PJ	50.00000	100.00000	PJ	1.00	2.00	PJ	1.00000
7	285118800	132440.00	264880.00	PJ	50.00000	100.00000	PJ	1.00	2.00	PJ	1.00000
7	285126700	33110.00	66220.00	PJ	50.00000	100.00000	PJ	1.00	2.00	PJ	1.00000
7	285133100	56.80	113.60	PJ	1.00000	2.00000	PJ	1.00	2.00	PJ	1.00000
7	285150000	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
7	285152300	7568.00	15136.00	PJ	2.00000	4.00000	PJ	1.00	2.00	PJ	1.00000
7	285153100	7568.00	15136.00	PJ	2.00000	4.00000	PJ	1.00	2.00	PJ	1.00000
7	285159800	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
7	287990000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
7	287991000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
7	287991200	185.00	370.00	PJ	1.00000	2.00000	PJ	12.00	24.00	PJ	1.00000
7	287992000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
7	287993000	56.70	113.40	PJ	720.00000	1440.00000	PJ	720.00	1440.00	PJ	1.00000
7	287997100	185.00	370.00	PJ	168.00000	168.00000	PJ	48.00	96.00	PJ	1.00000
7	289135500	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289140000	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289141100	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289142400	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289143300	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289144100	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289144800	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289145300	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289145400	5.00	10.00	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289145700	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289146500	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289147100	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000



Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
7	289149900	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289162500	28.40	56.80	PJ	0.17000	0.33000	PJ	639.00	1278.00	PJ	1.00000
7	289170000	151.10	299.30	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
7	289171100	151.10	299.30	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
7	289172100	151.10	299.30	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
7	289173100	151.10	299.30	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
7	289174600	151.10	299.30	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
7	289177100	151.10	299.30	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
7	289954300	85.00	170.00	PJ	0.17000	0.33000	PJ	4.00	8.00	PJ	1.00000
7	289957300	250.00	500.00	PJ	0.25000	0.50000	PJ	365.00	730.00	PJ	1.00000
7	289959700	56.70	113.40	PJ	0.25000	0.50000	PJ	312.00	624.00	PJ	1.00000
7	2911D5700	7568.00	15136.00	PJ	2.00000	4.00000	PJ	1.00	2.00	PJ	1.00000
7	299202100	50.10	93.30	PJ	0.13330	0.25000	PJ	312.00	624.00	PJ	1.00000
7	299203100	50.10	93.30	PJ	0.13330	0.25000	PJ	312.00	624.00	PJ	1.00000
7	329189000	50.00	100.00	PJ	0.25000	0.50000	PJ	50.00	100.00	PJ	1.00000
7	395120600	0.25	0.50	PJ	0.25000	0.50000	PJ	2600.00	5200.00	PJ	1.00000
8	202626300	100.00	200.00	PJ	0.00800	0.01700	PJ	1825.00	3650.00	PJ	1.00000
8	207910000	2.00	4.00	PJ	0.00800	0.01700	PJ	1825.00	3650.00	PJ	1.00000
8	281991500	114.00	228.00	PJ	0.50000	1.00000	PJ	365.00	730.00	PJ	1.00000
8	281994000	228.00	556.00	PJ	0.50000	1.00000	PJ	365.00	730.00	PJ	1.00000
8	284112100	56.70	113.40	PJ	0.33000	0.66000	PJ	255500.00	511000.00	PJ	1.00000
8	284112300	28.35	56.70	PJ	0.33000	0.66000	PJ	255500.00	511000.00	PJ	1.00000
8	284112500	10.00	20.00	PJ	0.03000	0.07000	PJ	730.00	1460.00	PJ	1.00000
8	284112600	5.00	10.00	PJ	0.03000	0.07000	PJ	730.00	1460.00	PJ	1.00000
8	284112800	5.00	10.00	PJ	0.03000	0.07000	PJ	730.00	1460.00	PJ	1.00000
8	284114000	100.00	200.00	PJ	0.02000	0.03000	PJ	730.00	1460.00	PJ	1.00000
8	284116000	10.00	20.00	PJ	0.03000	0.07000	PJ	6.00	12.00	PJ	1.00000
8	284117700	10.00	20.00	PJ	0.03000	0.07000	PJ	6.00	12.00	PJ	1.00000
8	284117800	5.00	10.00	PJ	0.03000	0.07000	PJ	6.00	12.00	PJ	1.00000
8	284120100	56.70	113.40	PJ	0.33000	0.66000	PJ	255500.00	511000.00	PJ	1.00000
8	284120300	28.35	56.70	PJ	0.33000	0.66000	PJ	255500.00	511000.00	PJ	1.00000
8	284120400	5.00	10.00	PJ	0.03000	0.07000	PJ	730.00	1460.00	PJ	1.00000
8	284120500	5.00	10.00	PJ	0.03000	0.07000	PJ	730.00	1460.00	PJ	1.00000
8	284120600	2.00	4.00	PJ	0.03000	0.07000	PJ	730.00	1460.00	PJ	1.00000
8	284120900	5.00	10.00	PJ	0.03000	0.07000	PJ	730.00	1460.00	PJ	1.00000
8	284121100	5.00	10.00	PJ	0.03000	0.07000	PJ	730.00	1460.00	PJ	1.00000
8	284130000	0.25	0.50	PJ	0.01000	0.02000	PJ	10585.00	21170.00	PJ	1.00000
8	284131200	0.25	0.50	PJ	0.01000	0.02000	PJ	10585.00	21170.00	PJ	1.00000
8	284131300	0.25	0.50	PJ	0.01000	0.02000	PJ	10585.00	21170.00	PJ	1.00000
8	284131400	0.25	0.50	PJ	0.01000	0.02000	PJ	10585.00	21170.00	PJ	1.00000
8	284131500	2.00	4.00	PJ	0.01000	0.02000	PJ	10585.00	21170.00	PJ	1.00000
8	284139800	1.00	2.00	PJ	0.01000	0.02000	PJ	10585.00	21170.00	PJ	1.00000
8	284231100	0.50	1.00	PJ	0.02000	0.03000	PJ	180.00	360.00	PJ	1.00000
8	284232100	453.60	907.20	PJ	0.50000	1.00000	PJ	416.00	832.00	PJ	1.00000
8	284232600	12.00	24.00	PJ	0.08000	0.17000	PJ	2190.00	4380.00	PJ	1.00000
8	284232800	907.20	1814.40	PJ	0.01000	0.02000	PJ	60.00	120.00	PJ	1.00000
8	284233000	5.00	10.00	PJ	0.08000	0.17000	PJ	730.00	1460.00	PJ	1.00000
8	284233200	0.50	1.00	PJ	0.01000	0.02000	PJ	1647.00	3294.00	PJ	1.00000
8	284235000	3782.00	7564.00	PJ	1.00000	2.00000	PJ	12.00	24.00	PJ	1.00000
8	284235100	3782.00	7564.00	PJ	1.00000	2.00000	PJ	12.00	24.00	PJ	1.00000
8	284235300	3782.00	7564.00	PJ	1.00000	2.00000	PJ	12.00	24.00	PJ	1.00000
8	284237100	5.00	10.00	PJ	0.02000	0.03000	PJ	52.00	156.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
8	284238100	5.00	10.00	PJ	0.01670	0.03300	PJ	365.00	1095.00	PJ	1.00000
8	284238500	56.70	113.40	PJ	720.00000	1440.00000	PJ	730.00	1460.00	PJ	1.00000
8	284239700	113.00	226.00	PJ	0.02000	0.03000	PJ	7665.00	15330.00	PJ	1.00000
8	284241500	1.00	2.00	PJ	0.00500	0.01000	PJ	104.00	208.00	PJ	1.00000
8	284242000	907.00	1814.00	PJ	2.00000	4.00000	PJ	24.00	48.00	PJ	1.00000
8	284242100	907.00	1814.00	PJ	2.00000	4.00000	PJ	24.00	48.00	PJ	1.00000
8	284242300	907.00	1814.00	PJ	2.00000	4.00000	PJ	24.00	48.00	PJ	1.00000
8	284242500	1200.00	2400.00	PJ	2.00000	4.00000	PJ	24.00	48.00	PJ	1.00000
8	284246300	56.70	113.40	PJ	0.08000	0.17000	PJ	6.00	12.00	PJ	1.00000
8	284249800	1.73	3.46	PJ	0.08000	0.17000	PJ	24.00	48.00	PJ	1.00000
8	284300000	186.50	373.00	PJ	0.50000	1.00000	PJ	24.00	48.00	PJ	1.00000
8	284477500	5.00	10.00	PJ	0.01670	0.03300	PJ	520.00	1040.00	PJ	1.00000
8	285100000	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
8	285110000	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
8	285113700	0.00	0.00	PJ	0.00000	0.00000	PJ	0.00	0.00	PJ	1.00000
8	285116000	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
8	285116500	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
8	285116900	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
8	285117100	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
8	285117500	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
8	285117700	47270.00	94540.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
8	285118100	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
8	285118300	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
8	285118600	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
8	285118800	189079.00	378158.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
8	285126700	47270.00	94540.00	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
8	285133100	56.80	113.60	PJ	48.00000	96.00000	PJ	1.00	2.00	PJ	1.00000
8	285150000	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
8	285152300	3784.00	7568.00	PJ	0.75000	1.50000	PJ	1.00	2.00	PJ	1.00000
8	285153100	3784.00	7568.00	PJ	0.80000	1.60000	PJ	1.00	2.00	PJ	1.00000
8	285159800	3629.00	7257.00	PJ	0.20000	0.40000	PJ	1.50	3.00	PJ	1.00000
8	287990000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
8	287991000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
8	287991200	185.00	370.00	PJ	1.00000	2.00000	PJ	12.00	24.00	PJ	1.00000
8	287992000	185.00	370.00	PJ	1.00000	2.00000	PJ	48.00	96.00	PJ	1.00000
8	287993000	56.70	113.40	PJ	720.00000	1440.00000	PJ	12.00	24.00	PJ	1.00000
8	287997100	185.00	370.00	PJ	168.00000	168.00000	PJ	48.00	96.00	PJ	1.00000
8	289135500	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289140000	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289141100	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289142400	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289143300	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289144100	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289144800	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289145300	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289145400	5.00	10.00	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289145700	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289146500	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289147100	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289149900	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289162500	28.40	56.80	PJ	0.17000	0.33000	PJ	256.00	512.00	PJ	1.00000
8	289170000	151.10	299.30	PJ	0.25000	0.50000	PJ	12.00	24.00	PJ	1.00000

Appendix E  
Product-Environment File

ENVIRMT_ID	PRODUCT_ID	QTY_USED_A	QTY_USED_U	QTY_USED_R	DRTN_USE_A	DRTN_USE_U	DRTN_USE_R	FREQ_USE_A	FREQ_USE_U	FREQ_USE_R	FACTN_BLDG
8	289171100	151.10	299.30	PJ	0.25000	0.50000	PJ	12.00	24.00	PJ	1.00000
8	289172100	151.10	299.30	PJ	0.25000	0.50000	PJ	12.00	24.00	PJ	1.00000
8	289173100	151.10	299.30	PJ	0.25000	0.50000	PJ	12.00	24.00	PJ	1.00000
8	289174600	151.10	299.30	PJ	0.25000	0.50000	PJ	12.00	24.00	PJ	1.00000
8	289177100	151.10	299.30	PJ	0.25000	0.50000	PJ	12.00	24.00	PJ	1.00000
8	289954300	85.00	170.00	PJ	0.17000	0.33000	PJ	2.00	4.00	PJ	1.00000
8	289959700	56.70	113.40	PJ	0.25000	0.50000	PJ	156.00	312.00	PJ	1.00000
8	2911A2200	5.00	10.00	PJ	0.01670	0.03300	PJ	30.00	60.00	PJ	0.04900
8	2911D5700	3784.00	7568.00	PJ	0.80000	1.60000	PJ	1.00	2.00	PJ	1.00000
8	299202100	50.10	93.30	PJ	0.13330	0.25000	PJ	156.00	312.00	PJ	1.00000
8	299203100	50.10	93.30	PJ	0.13330	0.25000	PJ	156.00	312.00	PJ	1.00000
8	329189000	50.00	100.00	PJ	0.25000	0.50000	PJ	50.00	100.00	PJ	1.00000
8	395120600	0.25	0.50	PJ	0.25000	0.50000	PJ	2600.00	5200.00	PJ	1.00000
9	284120400	5.00	10.00	PJ	0.16000	0.34000	PJ	12.00	24.00	PJ	1.00000
9	284120500	5.00	10.00	PJ	0.16000	0.34000	PJ	12.00	24.00	PJ	1.00000
9	284231100	0.50	1.00	PJ	0.08000	0.17000	PJ	12.00	24.00	PJ	1.00000
9	284231500	0.50	1.00	PJ	0.08000	0.17000	PJ	12.00	24.00	PJ	1.00000
9	284235100	113.00	226.00	PJ	0.16000	0.34000	PJ	12.00	24.00	PJ	1.00000
9	284238100	5.00	10.00	PJ	0.01670	0.03300	PJ	365.00	1095.00	PJ	1.00000
9	284238500	56.70	113.40	PJ	720.00000	1440.00000	PJ	12.00	24.00	PJ	1.00000
9	284239700	113.00	226.00	PJ	0.02000	0.03000	PJ	12.00	24.00	PJ	1.00000
9	284241500	1.00	2.00	PJ	0.02000	0.03000	PJ	12.00	24.00	PJ	1.00000
9	284246300	56.70	113.40	PJ	0.08000	0.17000	PJ	12.00	24.00	PJ	1.00000
9	284249800	1.73	3.46	PJ	0.08000	0.17000	PJ	2.00	5.92	PJ	1.00000
9	284300000	186.50	373.00	PJ	0.50000	1.00000	PJ	12.00	24.00	PJ	1.00000
9	284306100	186.50	373.00	PJ	0.50000	1.00000	PJ	12.00	24.00	PJ	1.00000
9	284477500	5.00	10.00	PJ	0.01670	0.03300	PJ	12.00	24.00	PJ	1.00000
9	285133100	429.00	809.00	PJ	0.66000	1.00000	PJ	4.22	6.10	PJ	1.00000
9	285150000	209.00	498.00	PJ	0.20000	0.40000	PJ	5.66	6.00	PJ	1.00000
9	289140000	3.00	6.00	PJ	0.07000	0.50000	PJ	3.00	15.00	PJ	1.00000
9	289170000	151.10	299.30	PJ	0.25000	0.50000	PJ	2.00	4.00	PJ	1.00000
9	289173100	151.10	299.30	PJ	0.25000	0.50000	PJ	2.00	4.00	PJ	1.00000
9	289174600	151.10	299.30	PJ	0.25000	0.50000	PJ	2.00	4.00	PJ	1.00000
9	289954300	85.00	170.00	PJ	0.17000	0.33000	PJ	2.00	4.00	PJ	1.00000
9	289958100	87.10	404.00	PJ	0.16000	0.34000	PJ	12.00	24.00	PJ	1.00000
9	299202100	50.10	93.30	PJ	0.13330	0.25000	PJ	12.00	24.00	PJ	1.00000
9	299203100	50.10	93.30	PJ	0.13330	0.25000	PJ	12.00	24.00	PJ	1.00000
9	329189000	50.00	100.00	PJ	0.25000	0.50000	PJ	2.00	4.00	PJ	1.00000

## **Appendix F**

### **Methodology to Derive 50th and 90th Percentile Product Usage Factors from the Simmons Market and Media Study**

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**MEMORANDUM**

**TO:** Ms. Christina Cinalli  
**FROM:** Ms. Holly Rosnick  
**DATE:** September 28, 1993  
**SUBJECT:** Revision of the Methodology for Determining the 50th and 90th Percentile of Use From the Ranges Provided in the Simmons Survey Report.

The Simmons Survey Report lists ranges of product uses for various consumer products. These are shown in the attached Simmons Report (Attachment 1). Linear interpolation was used to determine the 50th and 90th percentile of use from the ranges (Attachment 2). The procedure used to determine the percentiles is as outlined below:

- 1) Product descriptions, percentages of the population using the product; and units were entered in column one.
- 2) Ranges of product use and number of respondents for each use class were extracted from the Simmons Report and entered in column 2 (example, numbers circled in attachment 1);
- 3) Midpoints for each use range were calculated if necessary (column 3).
- 4) The total number of respondents were input in column 4 and total respondents were summed.
- 5) The percent of each use range to the total was calculated by dividing the number of respondents for each use range by total number of respondents (column 5).
- 6) Cumulative percentages were calculated by adding percent of total for each use range to percentages for previous use ranges (column 6).
- 7) To calculate the 50th and 90th percentile values, the cumulative percentage directly below 50% (90%) and directly above 50% (90%) was selected.

Example: dishwash liquid not auto wash  
group 1-6 at 37.789% and 7-14 at 73.695%.

- 8) The difference between the cumulative percent of the groups selected in 7) was calculated (column 7).  
Example: dishwash liquid not auto wash  
 $73.695 - 37.789 = 35.90566$  (column 7).
- 9) The cumulative percentile directly below 50% (90%) was subtracted from 50 (90) (column 8).  
Example: dishwash liquid not auto wash  
 $50 - 37.789 = 12.21$
- 10) To get percent below 50 (90), the value calculated in 9) was divided by the value in 8) (column 9).  
Example: dishwash liquid not auto wash  
 $12.21 / 35.90566 = 0.3401$
- 11) The difference between the midpoints of the use ranges selected in 7) (column 3) was multiplied by the number calculated in 10).  
Example: dishwash liquid not auto wash  
 $(10.5 - 3.5) * 0.3401 = 2.3807$ .
- 12) Take high value of low use range selected in 7) and add value calculated in 11).  
Example: dishwash liquid not auto wash  
 $6 + 2.3807 = 8.3807$

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Attachment 1  
SIMMONS CHOICES SYSTEM  
VERSAR, INC.

SOURCE: SMM 92 WGT: POP  
TABLE BASE: HH USES DISHWASH LIQ NOT AUTO DISHWASHER: YES

ROW	CELL	TOTAL
TOTAL	#RESP	17487
	(000)	145726
	VERT%	100.00
	HORZ%	100.00
	INDEX	100
DISH LIQ - #	#RESP	17487
DISHLOADS LAST 7	(000)	145726
DAYS: TOTAL	VERT%	100.00
	HORZ%	100.00
	INDEX	100
VOLUME: DISH LIQ - #	#RESP	17487
DISHLOADS LAST 7	(000)	1467005
DAYS: TOTAL	VERT%	1006.68
	HORZ%	100.00
	INDEX	100
AVERAGE: DISH LIQ -	#RESP	17487
# DISHLOADS LAST 7	(000)	10.07
DAYS: TOTAL	VERT%	.00
	HORZ%	100.00
	INDEX	100
DISH LIQ - #	#RESP	4428
DISHLOADS LAST 7	(000)	41897
DAYS: HEAVY 15+	VERT%	28.75
	HORZ%	100.00
	INDEX	100
VOLUME: DISH LIQ - #	#RESP	4428
DISHLOADS LAST 7	(000)	846961
DAYS: HEAVY 15+	VERT%	581.20
	HORZ%	100.00
	INDEX	100

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SIMMONS CHOICES SYSTEM  
VERSAR, INC.

SOURCE: SMM 92 WGT: POP  
TABLE BASE: HH USES DISHWASH LIQ NOT AUTO DISHWASHER: YES

ROW	CELL	TOTAL
AVERAGE: DISH LIQ -	#RESP	4428
# DISHLOADS LAST 7	(000)	20.22
DAYS: HEAVY 15+	VERT%	.01
	HORZ%	100.00
	INDEX	100
DISH LIQ - #	#RESP	688
DISHLOADS LAST 7	(000)	6752
DAYS: 26 OR MORE	VERT%	4.63
	HORZ%	100.00
	INDEX	100
VOLUME: DISH LIQ - #	#RESP	688
DISHLOADS LAST 7	(000)	175544
DAYS: 26 OR MORE	VERT%	120.46
	HORZ%	100.00
	INDEX	100
AVERAGE: DISH LIQ -	#RESP	688
DISHLOADS LAST 7	(000)	26.0
DAYS: 26 OR MORE	VERT%	.01
	HORZ%	100.00
	INDEX	100
DISH LIQ - #	#RESP	1019
DISHLOADS LAST 7	(000)	9397
DAYS: 21 - 25	VERT%	6.44
	HORZ%	100.00
	INDEX	100
VOLUME: DISH LIQ - #	#RESP	1019
DISHLOADS LAST 7	(000)	220827
DAYS: 21 - 25	VERT%	151.53
	HORZ%	100.00
	INDEX	100

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SIMMONS CHOICES SYSTEM  
VERSAR, INC.

SOURCE: SMM 92 WGT: POP  
TABLE BASE: HH USES DISHWASH LIQ NOT AUTO DISHWASHER: YES

ROW	CELL	TOTAL
AVERAGE: DISH LIQ -	#RESP	1019
# DISHLOADS LAST 7	(000)	23.50
DAYS: 21 - 25	VERT%	.01
	HORZ%	100.00
	INDEX	100
DISH LIQ - #	#RESP	2721
DISHLOADS LAST 7	(000)	25748
DAYS: 14 - 20	VERT%	17.66
	HORZ%	100.00
	INDEX	100
VOLUME: DISH LIQ - #	#RESP	2721
DISHLOADS LAST 7	(000)	450590
DAYS: 14 - 20	VERT%	309.20
	HORZ%	100.00
	INDEX	100
AVERAGE: DISH LIQ -	#RESP	2721
# DISHLOADS LAST 7	(000)	17.50
DAYS: 14 - 20	VERT%	.01
	HORZ%	100.00
	INDEX	100
DISH LIQ - #	#RESP	6044
DISHLOADS LAST 7	(000)	50859
DAYS: MEDIUM 7-14	VERT%	34.90
	HORZ%	100.00
	INDEX	100
VOLUME: DISH LIQ - #	#RESP	6044
DISHLOADS LAST 7	(000)	448296
DAYS: MEDIUM 7-14	VERT%	307.62
	HORZ%	100.00
	INDEX	100

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SIMMONS CHOICES SYSTEM  
VERSAR, INC.

SOURCE: SMM 92 WGT: POP  
TABLE BASE: HH USES DISHWASH LIQ NOT AUTO DISHWASHER: YES

ROW	CELL	TOTAL
AVERAGE: DISH LIQ -	#RESP	6044
# DISHLOADS LAST 7	(000)	8.81
DAYS: MEDIUM 7-14	VERT%	.00
	HORZ%	100.00
	INDEX	100
DISH LIQ - #	#RESP	2991
DISHLOADS LAST 7	(000)	26366
DAYS: 8 - 13	VERT%	18.09
	HORZ%	100.00
	INDEX	100
VOLUME: DISH LIQ - #	#RESP	2991
DISHLOADS LAST 7	(000)	276844
DAYS: 8 - 13	VERT%	189.97
	HORZ%	100.00
	INDEX	100
AVERAGE: DISH LIQ -	#RESP	2991
# DISHLOADS LAST 7	(000)	10.50
DAYS: 8 - 13	VERT%	.00
	HORZ%	100.00
	INDEX	100
DISH LIQ - #	#RESP	3053
DISHLOADS LAST 7	(000)	24493
DAYS: 7	VERT%	16.80
	HORZ%	100.00
	INDEX	100
VOLUME: DISH LIQ - #	#RESP	3053
DISHLOADS LAST 7	(000)	171452
DAYS: 7	VERT%	117.65
	HORZ%	100.00
	INDEX	100

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SIMMONS CHOICES SYSTEM  
VERSAR, INC.

SOURCE: SMM 92 WGT: POP  
TABLE BASE: HH USES DISHWASH LIQ NOT AUTO DISHWASHER: YES

ROW	CELL	TOTAL
AVERAGE: DISH LIQ -	#RESP	3053
# DISHLOADS LAST 7	(000)	7.0
DAYS: 7	VERT%	.00
	HORZ%	100.00
	INDEX	100
DISH LIQ - #	#RESP	7015
DISHLOADS LAST 7	(000)	52970
DAYS: LIGHT 0-6	VERT%	36.34
	HORZ%	100.00
	INDEX	100
VOLUME: DISH LIQ - #	#RESP	7015
DISHLOADS LAST 7	(000)	171747
DAYS: LIGHT 0-6	VERT%	117.85
	HORZ%	100.00
	INDEX	100
AVERAGE: DISH LIQ -	#RESP	7015
# DISHLOADS LAST 7	(000)	3.24
DAYS: LIGHT 0-6	VERT%	.00
	HORZ%	100.00
	INDEX	100
DISH LIQ - #	#RESP	6361
DISHLOADS LAST 7	(000)	49071
DAYS: 1 - 6	VERT%	33.67
	HORZ%	100.00
	INDEX	100
VOLUME: DISH LIQ - #	#RESP	6361
DISHLOADS LAST 7	(000)	171747
DAYS: 1 - 6	VERT%	117.85
	HORZ%	100.00
	INDEX	100

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SIMMONS CHOICES SYSTEM  
VERSAR, INC.

SOURCE: SMM 92 WGT: POP  
TABLE BASE: HH USES DISHWASH LIQ NOT AUTO DISHWASHER: YES

ROW	CELL	TOTAL
AVERAGE: DISH LIQ -	#RESP	6361
# DISHLOADS LAST 7	(000)	3.50
DAYS: 1 - 6	VERT%	.00
	HORZ%	100.00
	INDEX	100

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**Attachment 2**  
Calculations of the 50th and 90th Use From Interpolation

Using the midpoint of the ranges in the survey report for "applications/yr", we interpolated the median and 90th %iles.

USER POPULATION DESCRIPTION (1)	uses/year (midpoint) (2)	N resp	midpoint (3)	users		interpolations		50th =	90th =
				% of cum% of users (4)	(5)	(6)	(7)		
<b>Auto dishwasher detergent</b>									
total % pop resp yes = 36.7%		4317	52.9239	52.9239					0
# dishloads last 7 days		2631	32.2545	85.1764	9.12100037	4.8216	0.52863	3.43009	17.44
		744	8.121	84.2994					
		247	3.02807	97.3274					
		216	2.67255	100					
total		8157							
<b>dishwash liquid not auto wash</b>									
total % pop resp yes = 70.8		6381	37.7689	37.7689	35.9056615	12.211	0.34009	2.30063	8.38
# dishloads last 7 days		6044	35.9057	73.6945					
		2731	16.1647	89.8592	8.05358522	0.1408	0.02328	0.15116	20.15
		1019	6.05359	95.9128					
		868	4.06721	100					
total		10633							
<b>laundry washloads</b>									
total % pop resp yes = 83.1		5620	29.9175	29.9175	49.8353474	20.083	0.4046	2.02301	5.02
# washloads last 7 days		6324	49.8353	79.5528					
		1425	7.59584	87.1387	8.26031408	2.6613	0.45708	1.37117	13.37
		1178	6.26031	93.399					
		765	4.0724	97.4714					
		475	2.52861	100					
total		18785							
<b>bleach usage</b>									
total % pop resp yes = 74.4		4824	41.8221	41.8221	43.7877481	8.3779	0.19133	0.287	1.29
# washloads last 7 days		5075	43.7877	85.4098	6.63675582	4.5902	0.53147	1.06294	4.06
		1001	8.5378	94.0488					
		348	3.00259	97.0492					
		342	2.85082	100					
total		11590							
<b>pre-soak usage</b>									
total % pop resp yes = 43.2		2502	29.543	29.543	48.0621089	20.457	0.44412	0.66618	1.87
# washloads last 7 days		3601	46.0621	75.8051					
		1098	12.0640	88.5701	5.5378439	1.4269	0.25821	0.51642	5.52
		489	5.53784	94.1079					
		499	5.89208	100					
total		8469							

Calculations of the 50th and 90th Use From Interpolation

Using the midpoint of the ranges in the survey report for applications/yr, we interpolated the median and 90th %iles.

USER POPULATION DESCRIPTION	uses/year (midpoint)		N		% of cum% of users		Interpolations	
	midpoint	resp	users	users	users	users	50th=	90th=
<b>fabric softeners</b>								
total % pop resp yes = 63.6								
# washloads last 7 days								
1-3	2	4335	32,477	39,65388	17.52	0.4419	1,5467	4.55
4-7	5.5	5293	39,654	72,131				
8-9	8.5	1551	11.82	83.75	9.409649	6.25	0.6642	2,3246
10-14	12	1256	9,4096	93.16				
15+		913	6.64	100				
total		13348						11.32
<b>line fab soap &amp; deterg usage</b>								
total % pop resp yes = 44								
# washloads last 7 days								
1		3203	43.59	43.59				
2		1920	26.13	69.72	26.12956	6.41	0.2453	0,2453
3		1023	13.922	83.642				
4-7	5.5	707	9.6217	93.263	9.621666	6.356	0.6808	1.6521
8+		485	6.7365	100				
total		7348						4.65
<b>reg laundry soap &amp; deterg usage</b>								
total % pop resp yes = 90.2								
# washloads last 7 days								
1-3	2	6771	34,527	34,527	40.76833	15.47	0.3794	1,3276
4-7	5.5	7999	40,788	75,315				
8-9	8.5	2068	10,545	85.86	9.06634	4.14	0.4566	1.6265
10-15	12.5	1778	9,0663	94.926				
16+		895	5.0737	100				
total		19611						10.83
<b>spray starch usage</b>								
total % pop resp yes = 90.2								
cans or pumps last 30 days								
1		1301	47.726	47.726	27.67968	2.274	0.0816	0.0816
2		760	27.86	75.605				
3		305	11.189	86.794	13.20816	3.206	0.2428	0.2428
4+		360	13.206	100				
total		2728						3.24
<b>abrasive cleaner usage</b>								
total % pop resp yes = 75.2								
containers last 30 days								
1		4756	52.247	52.247				
2		2472	27.156	79.402	10.74371	10.6	0.8864	0.8864
3		978	10.744	90.146				
4-5	4.5	550	6.042	96.188				
6+		347	3.8119	100				
total		9103						3

Calculations of the 50th and 90th Use From Interpolation

Using the midpoint of the ranges in the survey report for applications/yr, we interpolated the median and 90th %iles.

USER POPULATION DESCRIPTION	uses/year (midpoint)	N resp	% of cum% of users	interpolations
<b>air fresh &amp; home deod usage</b>				
total % pop resp yes = 75.2				
containers last 6 months				
0-1	0.5	4084	31.708	42.05745
2-3	2.5	5417	42.037	16.29
4-5	4.5	1896	14.72	0.4349
6+		1483	11.514	0.8699
total		12880	100	50th= 1.87
				90th= 5.20
<b>drain cleaner usage</b>				
total % pop resp yes = 40.8				
containers last 12 months				
1		2359	38.215	32.35056
2		1997	32.351	11.79
3		865	14.013	0.3643
4		478	7.711	0.7032
5		168	2.8891	0.7032
6+		310	5.0219	0.7032
total		6173	100	50th= 1.36
				90th= 3.70
<b>floorwax usage</b>				
total % pop resp yes = 29.8				
containers last 6 months				
1		1756	37.842	35.36877
2		1650	35.37	12.36
3		735	15.756	0.3484
4-5	4.5	277	5.9378	0.3494
6+		247	5.2847	0.3114
total		4665	100	50th= 1.35
				90th= 3.31
<b>furniture polish usage</b>				
total % pop resp yes = 71.3				
containers last 6 months				
1		4450	43.066	30.34937
2		3138	30.349	6.934
3		1528	14.788	0.2285
4-5	4.5	746	7.2196	0.2285
6		473	4.5776	0.2489
total		10333	100	50th= 1.23
				90th= 3.37
<b>household cleaner usage</b>				
total % pop resp yes = 75.2				
use last 30 days				
1		4596	38.374	37.05435
2		4438	37.054	11.03
3		1702	14.211	0.3138
4-5	4.5	801	6.6878	0.3138
6+		440	3.8737	0.362
total		11977	100	50th= 1.31
				90th= 3.08



Calculations of the 50th and 90th Use From Interpolation

Using the midpoint of the ranges in the survey report for applications/yr, we interpolated the median and 90th %iles.

USER POPULATION DESCRIPTION	uses/year (midpoint)	midpoint	N		% of cum% of users		Interpolations	
			resp	users	users	users	50th=	90th=
<b>metal polish/oven cleaner usage</b>								
total % pop resp yes = 26.3			1045	50,654	50.654			
use last 6 months			587	26,454	79,108	11.3427	10.89	0.9603
	1							50th=
	2							90th=
	3							1
	4-5							2.06
	6+							
total			85	4,1202	100			
			2063					
<b>rug cleaners/shampoo usage</b>								
total % pop resp yes = 35.9			2163	43,374	43,374	33,91815	6.628	0.1954
use last 6 months			1707	33,916	77,29	13,01411	12.71	0.9766
	1							50th=
	2							90th=
	3							1.20
	4-5							2.96
	6+							
total			192	3,8148	100			
			6033					
<b>rug deodorizer usage</b>								
total % pop resp yes = 33.9			1522	26,442	26,442	31,42808	23.56	0.7496
use last 6 months			1809	31,428	57,87			50th=
	1							1.75
	2							
	3							
	4-5	4.5						
	6+							
total			612	10,632	100			
			5756					
<b>In-bowl toilet cleaner usage</b>								
total % pop resp yes = 44.2			3506	57,504	57,504			50th=
use last 30 days			1510	24,766	82,27	8,908019	7.73	0.868
	1							1
	2							2.87
	3							
	4-5							
	6+							
total			250	4,1004	100			
			6097					
<b>In-tank toilet cleaner usage</b>								
total % pop resp yes = 37.2			2505	42,264	42,264	34,94179	7.736	0.2214
use last 30 days			2071	34,942	77,206	12,95765	12.79	0.9874
	1							50th=
	2							90th=
	3							1.22
	4-5							2.99
	6+							
total			232	3,9143	100			
			5927					

Calculations of the 50th and 90th Use From Interpolation

Using the midpoint of the ranges in the survey report for "applications/yr", we interpolated the median and 90th %iles.

USER POPULATION DESCRIPTION	use/year/ (midpoint)	midpoint	N resp users	% of cum% of users	Interpolations	50th=	90th=
<b>In bowl toilet flusher usage</b>							
total % pop resp yes = 18.5			1064	40.1207	30.392157	0.8793	0.32508
use last 30 days			808	30.3922	70.5128		1.33
			408	15.4223	85.9351	0.182950	0.65343
	4.5	4.5	210	8.1628	95.098		3.67
	6+		130	4.90198	100		
total			2852				
<b>Kitchen and glass cleaner usage</b>							
total % pop resp yes = 79.5			4612	35.9803	35.471811	14.02	0.39524
use last 6 months			4744	35.4718	71.4521		1.40
			2288	16.9583	88.4103	7.0955576	0.22103
	4.5	4.5	949	7.09558	95.5062		3.34
	6+		901	4.49378	100		
total			13374				
<b>creme line/condition usage</b>							
total % pop resp yes = 41.2			1569	13.6708	13.6708		
use last 7 days			1641	14.2682	27.969		
			1632	14.2197	42.1867	12.856347	7.8113
			1497	12.9583	55.1451	0.80289	0.60260
			784	6.6578	61.8019		3.80
			500	4.3554	66.1554		
			2617	22.8021	88.9605	0.1665805	0.25275
	8.5	8.5	708	6.1888	95.1204		7.25
	10+		559	4.87061	100		
total			11477				
<b>hair styling gels/mousse usage</b>							
total % pop resp yes = 30.1			459	13.0178	13.0178		
use last 7 days			486	14.0069	27.0245		
			444	12.5922	39.6787	18.704481	10.323
	4.5	4.5	589	16.7045	56.3812	0.618	0.82690
	6+		203	5.79723	62.1384		3.83
			810	22.9722	85.1106	0.9483334	4.8884
	8.5	8.5	245	6.9438	92.059	0.70387	1.05551
	10.13		130	3.6889	95.7459		8.08
	14.4		150	4.25411	100		
total			3526				
<b>hairpray usage</b>							
total % pop resp yes = 35.5			750	6.2457	6.2457		
use last 7 days			893	8.2465	15.1894		
			918	8.45721	23.6586		
			942	8.69726	32.3239		
			778	7.18309	39.507		
			447	4.12704	43.634	26.710368	0.368
			2893	26.7104	70.3444	0.23833	0.23833
	8.9	8.5	1406	12.9813	83.3258	18.674361	0.6744
	10+		1866	16.8744	100	0.40028	0.60042
total			10831				9.60

Calculations of the 50th and 90th Use From Interpolation

Using the midpoint of the ranges in the survey report for "applications", we interpolated the median and 90th %iles.

USER POPULATION DESCRIPTION	uses/year (midpoint)	midpoint	N resp. users	% of cum% of users	Interpolations
<b>shampoo usage</b>					
total % pop resp yes = 83.6			1823	8.75222	
use last 7 days	1		2626	12.417	21.3692
	2		2326	11.1671	32.5364
	3		2077	9.87167	42.666
	4		1442	6.82204	49.4311
	5		1012	4.85601	54.2697
	6		6295	30.2223	84.512
	7		6295	30.2223	84.512
	8-9	8.5	1665	8.13789	92.6467
	10-11	10.5	478	2.29668	94.9433
	12+		1052	5.05095	100
total			20629		
<b>hair coloring usage</b>					
total % pop resp yes = 11.4			926	23.8215	23.8215
use last 6 months	1	2.5	1421	36.7068	60.5303
	2-3	4.5	817	15.939	76.4694
	4-5	6.5	498	12.8648	89.3343
	6-7	8.5	183	4.77813	94.1124
	8-13	10.5	224	5.78662	100
total			3571		
<b>home permanents</b>					
total % pop resp yes = 6.4			820	30.9551	30.9551
use last 12 months	1	2.5	759	28.6523	59.6074
	2	4.5	342	12.8105	72.4179
	3	6.5	262	9.86052	82.2784
	4	8.5	137	5.17176	87.4502
	5	10.5	328	12.4196	100
total			2549		
<b>hair shave lotion usage</b>					
total % pop resp yes = 70.7			813	7.24683	7.24683
use last 6 months	1	11.4	1143	16.1509	23.3977
	2-3	13.4	1036	14.5672	37.9649
	4-5	15.4	449	6.3445	44.3094
	6	17.4	2853	40.3137	84.6231
	7	19.4	790	11.029	95.6521
	8-13	21.4	261	4.11191	100
total			7077		
<b>depilatory usage (hair removal)</b>					
total % pop resp yes = 17.7			89	5.0862	5.0862
use last 12 months	1	3.5	175	10.0057	15.0913
	2	5.5	412	23.5563	38.6476
	3-4	7.5	351	20.0666	58.7142
	5-9	10.5	314	17.9531	76.6673
	10-14	13.5	130	7.43282	84.1002
	15-19	16.5	276	15.8946	100
total			1746		

Calculations of the 50th and 90th Use From Interpolation

Using the midpoint of the ranges in the survey report for "applications/yr", we interpolated the median and 90th %iles.

USER POPULATION DESCRIPTION	uses/year (midpoint)	midpoint	N resp users	% of cum% of users	Interpolations
perfume & toilet water usage					
total % pop resp yes = 81.2			814	7.8363	
use last 7 days			1626	20.7154	
			1220	15.5582	
			437	5.3727	
			1905	25.0008	
			1253	15.8601	
			723	9.22078	
			7641	100	
					50th= 8.01
					90th= 10.33
bath & shower additive usage					
total % pop resp yes = 47.5			535	12.0117	
use last 7 days			817	20.5882	
			1076	24.1541	
			539	12.1015	
			901	20.229	
			466	10.8115	
			4454	100	
					50th= 3.08
					90th= 7.06
loose & pressed powder					
total % pop resp yes = 51.1			266	5.84263	
use last 7 days			773	15.145	
			807	13.858	
			183	3.58412	
			1337	28.1951	
			873	19.0035	
			853	18.7124	
			5104	100	
					50th= 6.46
					90th= 14.41
facial cleansing creme usage					
total % pop resp yes = 73.8			486	8.06556	
use last 7 days			820	15.4003	
			645	10.1245	
			200	3.86402	
			1709	31.7481	
			825	13.8136	
			825	17.1837	
			5353	100	
					50th= 6.36
					90th= 14.40
foundation make-up usage					
total % pop resp yes = 82.2			373	5.84044	
use last 7 days			900	14.4009	
			832	14.8431	
			277	4.41153	
			2267	36.1043	
			877	13.9672	
			271	4.31587	
			374	5.85036	
			8278	100	
					50th= 6.29
					90th= 10.19

Calculations of the 50th and 90th Use From Interpolation

Using the midpoint of the ranges in the survey report for "applications/yr. we interpolated the median and 90th %iles.

USER POPULATION DESCRIPTION	uses/year (midpoint)	midpoint	N		% of cum% of		Interpolations	
			resp	users	users	users		
<b>lipstick &amp; lip gloss usage</b>								
total % pop resp yes = 80.5			1247	15,8324	15,8324			
use ave. on each day			1803	22,8025	38,2349	18,886185	11,785	0.63029
			1489	18,6662	56,9011			50th= 2.83
		4.5	1340	16,7983	73,8994			
		6.5	716	8,97581	82,6752	17,324809	7,3248	0.42279
			1382	17,3248	100			90th= 7.83
			7877					
<b>mascera usage</b>								
total % pop resp yes = 82.9			405	6,8848	6,8848			
use last 7 days			928	15,3211	22,0078			
		2.5	1023	16,8895	38,8971			
		4.5	282	4,6577	43,5529	35,347532	6,4471	0.18239
			2141	35,3475	78,9004	14,482605	11,1	0.78747
		10.5	878	14,4828	93,3831			50th= 6.18
			402	6,63895	100			90th= 9.09
			8057					
<b>shaving creme</b>								
total % pop resp yes = 65.5			1051	11,1465	11,1465			
use last 7 days			2081	21,8581	33,0046	17,743133	16,995	0.95786
		2.5	1673	17,7431	50,7477			50th= 4.92
		4.5	575	6,09821	56,8459	34,807509	33,154	0.9525
			3282	34,8075	91,6534			90th= 8.95
		10.5	543	5,75883	97,4122			
			244	2,58778	100			
			9429					

## **Appendix G**

### **Assignment of Product IDs to Cases**

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<u>PRODUCT ID</u>	<u>CASE</u>
207910000	3
227320100	4
242120000	4
243144500	4
243520000	4
243660000	4
243909800	4
249310300	4
249310500	4
249311200	4
249331400	4
249341200	4
249341400	4
252100000	4
252101100	4
252107300	4
252211400	4
252211500	4
259131100	4
267910000	4
267913000	4
283400000	3
283411500	3
283441500	1
283445000	3
283458300	3
283461100	3
283461800	3
283461900	3
283463000	3
283463700	3
283463900	3
283469800	3
283484100	3
283486500	3
283487100	3
283490000	3
284112100	2
284112500	3
284112600	3
284112800	2
284114100	2
284114300	2
284114600	2
284114900	2
284116200	2
284116700	2
284117300	3



<u>PRODUCT ID</u>	<u>CASE</u>
284117700	3
284117900	3
284120100	2
284120300	2
284120400	3
284120500	3
284120600	3
284120700	3
284120800	3
284121100	3
284121200	3
284121500	2
284121800	3
284122000	2
284122100	2
284122400	2
284122600	2
284123000	2
284123100	2
284123500	2
284126100	2
284131100	3
284131500	3
284132200	3
284139700	3
284139800	3
284231100	3
284231500	3
284232100	3
284232600	2
284232800	2
284233000	3
284233200	3
284234200	3
284234400	2
284234700	3
284234800	3
284234900	3
284235000	3
284235100	3
284235300	3
284238100	1
284238500	1
284239500	3
284239700	3
284241100	3
284241500	3
284242000	3

PRODUCT ID	CASE
284242100	3
284242300	3
284244200	3
284244300	3
284246300	3
284249800	3
284300000	3
284303100	3
284306100	3
284400000	3
284414900	2
284415600	3
284415900	3
284420000	3
284421100	3
284422300	3
284423500	3
284424500	3
284430000	3
284431000	2
284431500	2
284431800	2
284432200	3
284432600	3
284432700	3
284433900	3
284434100	3
284435100	2
284436300	3
284436400	3
284436500	2
284439500	3
284442100	3
284449800	3
284452700	3
284461100	3
284461300	3
284461700	3
284461900	3
284462100	3
284462200	3
284462300	3
284462400	3
284462500	3
284462600	3
284462900	3
284471500	3
284472100	3

<u>PRODUCT ID</u>	<u>CASE</u>
284473100	3
284473500	3
284474100	3
284474500	3
284475100	3
284475500	3
284476500	3
284477100	2
284477500	3
284478100	3
284479500	3
285100000	3
285110000	3
285112500	3
285113700	3
285114100	3
285114400	3
285114900	3
285116000	3
285117100	3
285117500	3
285117700	3
285118100	3
285118300	3
285118600	3
285118800	3
285126700	3
285131100	3
285131300	3
285133100	3
285150000	3
285152300	3
285153100	3
285159800	3
287900000	3
287950000	3
287960000	3
287970000	3
287988500	3
287990000	3
287991000	3
287991200	3
287992000	3
287993000	3
287993500	3
287994000	3
287994500	3
289135500	3

<u>PRODUCT ID</u>	<u>CASE</u>
289140000	3
289141100	3
289142300	3
289144100	3
289144800	3
289145300	3
289147100	3
289149800	3
289170000	3
289171100	3
289172100	3
289173100	3
289174100	3
289174600	3
289176100	3
289177100	3
289310000	3
289310500	3
289311500	3
289320000	3
289323100	3
289323300	3
289323400	3
289323500	3
289330000	3
289334300	3
289334500	3
289334900	3
289340000	3
289348200	3
289348300	3
289348500	3
289348600	3
289358500	3
289953400	3
289954300	3
289954500	3
289957200	3
289957300	2
289958200	3
289958400	3
289959300	3
289959700	3
289959900	3
2911D5700	3
299202100	3
299203100	3
299909800	3

<u>PRODUCT ID</u>	<u>CASE</u>
3011D3900	3
306942600	4
308631000	4
329611100	4
329613000	4
329616100	4
395120000	3
395241900	3
399601100	4
399602100	4
399602600	4

## **Appendix H**

### **Mathematical Documentation**

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# **SOURCE RANKING DATABASE**

## **Mathematical Documentation**

**Revision 1**

**March 1994**

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# SOURCE-RANKING DATABASE

## *Derivation of Concentration and Exposure Equations*

William C. Evans  
March 17, 1994

### Introduction

The problem is to find (1) the peak concentration and (2) the time-integrated concentration, for a single-compartment system, when driven by several kinds of source term, i.e., pollutant emission rate, behaviors. It is recognized that reversible sinks and traps (non-reversible sinks) would have an effect on these concentrations; however, it has been decided that sinks and traps will be ignored for this analysis (primarily due to a lack of data on the to-sink and from-sink exchange rates for many of the chemicals of interest in the SRD). It has also been decided, again mainly because of a lack of necessary parameter data, that we will not consider other factors, such as sources which interact with the compartment concentration (creating a nonlinear system) and nonconstant dilution (outdoor air exchange) rates.

We have these four source-term cases for various consumer products and "materials" (building materials and furnishings):

Case	Type	Application	Emission Rate Over Time
1	Consumer product	Pulse	Constant
2	Consumer product	Linear Ramp	Exponential Decrease
3	Consumer product	Linear Ramp	Constant
4	Build/Furn Material	—	Exponential Decrease

"Application" refers to the manner in which the product is introduced into the system; for the SRD, the "system" is just a single compartment, with constant-coefficient, first-order losses. A "pulse" application instantly begins, stays at a fixed level for some finite time, usually on the order of minutes, then instantly ceases. An example might be a laundry detergent which is activated by hot water, emits at a more-or-less constant rate during the wash cycle, and is then flushed away very quickly. Another example is an aerosol spray, which inserts material directly into the room, at a constant rate, as long as the button is held down. Also, a fast-drying wipe-on material mathematically approaches this behavior.

On the other hand, a "linear ramp" application builds up material, often being applied to a surface, as with paint. The mass to be released is introduced to the system gradually, as the product is applied. Only when the application is finished is all the mass ready to be emitted. However, we have the complication that the portions of the surface which were "painted" earlier have already begun emitting, while later portions may not have had product applied. This leads to a more complex dynamic behavior of the source term, and hence the room's concentration.

The "emission rate over time" refers to the behavior of the emission rate *once the material has entered the system*. This is especially important for materials applied in the "linear ramp" fashion, i.e., by a painting-style application of product to one small area at a time, as with a brush or a wiping cloth. For some chemicals, the emission rate per differential area (more simply called a "square") will be essentially constant, and the square just emits at that constant rate until it "dries up," at which time it instantaneously ceases emitting (turns off). This is inherently a *discontinuous* process, as squares turn on, emit, and turn off, abruptly.

On the other hand, some chemicals will exhibit an exponentially-decreasing emission rate, so that a square emits at its maximum rate at the time when it has been applied. This emission rate decreases rapidly at first, and then more slowly as time goes on. Mathematically, these squares never stop emitting, but as a practical matter, we can consider them to have "turned off" when they have released 90% of the material in the square. We will call this the "drying time," and we have an expression to calculate it (Chinn), based on the pollutant's molecular weight and vapor pressure. For the exponentially-decreasing emission rates, we will use either a stored value or use the drying time to calculate an effective emission-rate "decay constant," while for the constant emission rates, we use the drying time to tell when the squares (abruptly) turn off.

The linear-application cases lead to a relatively complicated source-term behavior. These behaviors were characterized by developing numerical simulations, which account for literally hundreds of squares, one square at a time, and observing how the total source term behaves, as a function of time, as the material is applied to the system and the individual squares turn on, emit, and turn off.

Unfortunately it happens that we will need two separate formulations for the source term, one for the constant-emitting squares, and another for the exponentially-decreasing squares. For many problems, taking the exponential decay parameter to zero will yield the equivalent of a constant behavior, but that strategy will not work for all mathematical formulations (usually because we end up dividing by zero). For this particular problem we also have a conceptual disconnect caused by the distinction between the continuous behavior of the exponentially-decreasing squares, compared to the discontinuous behavior for the constant-emitter squares. The dynamic behavior of the one case cannot be made to collapse to that of the other case simply by changing a parameter, because the way the squares act is fundamentally different (a square with a zero decay constant never turns off).

We should note that in the SRD program itself this distinction, between constant emission rate and exponentially-decreasing emission rate, will only require one test and branch in the program logic. There will be no detectable execution-time penalty.

For each of the cases in the table above, we will have two phases: (1) during the application of the product, and (2) after the application. We will need to find solutions for both phases, since the source term will have a different behavior in each phase, and then we will sum the time-integrated concentrations for the two phases in order to arrive at the total exposure for the product-use episode. We also have the complication that, if two of the system parameters are equal, a special solution must be

found. The two parameters are: (1) the first-order loss rate, which is the sum of the loss rate due to dilution and the loss rate due to chemical reaction, deposition, etc., and (2) a parameter which controls the rate of drying of the source.

The subsequent mathematical development will follow the format below, for each of the four source-behavior cases:

#### **Time-Dependent Concentration Solutions**

##### *Application Phase*

Parameters Not Equal

Parameters Equal

##### *Post-Application Phase*

Parameters Not Equal

Parameters Equal

#### **Time-Integrated Concentration (Exposure) Solutions**

##### *Application Phase*

Parameters Not Equal

Parameters Equal

##### *Post-Application Phase*

Parameters Not Equal

Parameters Equal

##### *Total-Episode Exposure*

#### **Peak-Concentration Solution**

##### *Application Phase*

Parameters Not Equal

Parameters Equal

##### *Post-Application Phase*

Parameters Not Equal

Parameters Equal

The time-dependent concentration solution is only needed as an intermediate step in finding the concentration integral and the peak concentration; it will not otherwise be used in the SRD program. The final result of the calculations presented in this document will be a set of equations to be used in the SRD; these will be algebraic, analytical solutions. This will greatly increase the speed of the SRD program, compared to using time-stepped, numerical solutions to find the peak and integrated concentrations. The trade-off is that this approach requires a substantial amount of mathematical effort.

## Mathematical Development

The solution set, to be utilized in the SRD program, for each source-behavior case consists of (1) the time-integrated concentration or "exposure" and (2) the peak concentration. As a step toward obtaining these results, we will need to find the time-dependent concentration. We have, by agreement: a single-compartment system; only first-order losses (dilution and other); no outdoor contribution; constant rate parameters; no interaction between the source emission rate and the room concentration. These assumptions lead to the following ordinary differential equation (ODE) for the concentration:

$$\frac{dC}{dt} = S(t) - k C$$

where  $S(t)$  is the time-dependent emission rate (mg/hr) divided by the room volume ( $m^3$ );  $k$  is the sum of all first-order loss rates ( $hr^{-1}$ );  $C$  is the room concentration ( $mg/m^3$ ).

There are many ways to solve this ODE, *once a source behavior  $S(t)$  has been specified*. A straightforward approach is to use the "convolution integral" to find the time-dependent concentration.<sup>1</sup> This solution is expressed as

$$C(t) = \int_0^t S(\tau) e^{-k(t-\tau)} d\tau + C(0)e^{-kt}$$

where  $C(0)$  is the concentration at time zero. While it may appear to be complicated, this is actually a relatively simple way to derive  $C(t)$ . We can either carry out the integration by hand, or we could use a symbolic-math program to do the tedious work. For most results below, a symbolic-math program called MathCad was used, although some were done by hand.

We will note at this point that it can happen that the drying parameter " $r$ ," used for some materials to characterize the rate of decrease of the emission rate in a source-term function of the form  $S(t) = S_0 * \exp(-r * t)$ , is numerically equal to the loss parameter " $k$ ." In this case the solution will "blow up" because, as will be seen below, there are factors of  $(r - k)$  in various denominators in the solutions. Therefore, we need another, special-case solution, for which we must return to the convolution integral and substitute  $k$  for  $r$ , and re-solve it. The new solution *will be* different, and it *must* be used if  $r = k$ . While this is unlikely, the SRD program would crash if it should happen; the program will therefore need to test this condition, and branch to the appropriate solution.

We must also be aware that the source behavior  $S(t)$  is different during the application of the material, as opposed to the post-application period. Mathematically, this means that the source term is discontinuous. Therefore we will need to find separate, but continuous, solutions for  $C(t)$  for the two phases. Furthermore we must recognize that the solution for the post-application

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<sup>1</sup> See any text on differential equations or linear-systems analysis for more background.

phase will need to account for a nonzero initial condition, since the concentration will, of course, not be zero when the application is finished. On the other hand, we will assume that it was zero at the start of the application.

Once we have the concentration  $C(t)$  in explicit form, we can simply integrate it to get the exposure. Thus we have the exposure  $E(T)$  over some time interval  $T$  (hr):

$$E(T) = \int_0^T C(t) dt$$

whose units are mg-hr / m<sup>3</sup>. If we divide  $E(T)$  by  $T$  we will have the average concentration over the interval, which here will be one year (8760 hr, measured from the start of the episode). For situations in which the emission of all the mass of the pollutant occurs in a time which is short compared to a year, we can simplify things considerably by taking the limit of the post-application  $E(T)$  expression as  $T$  approaches infinity. We will find, in particular, that we will get a very simple equation for the total-episode exposure when we do this. For the building-materials or furnishings case, however, this simplification will not work, since all the pollutant mass is not released within a year.

We can also note that, if we multiply  $E(T)$  by a breathing rate, assumed constant over  $T$ , in units of m<sup>3</sup> / hr, we will obtain the annual uptake, in mg. If the breathing rate was variable, and a known function of time, we could put it *inside* the  $E(T)$  integral, and then carry out the integration to get the uptake.

The final step is to find the peak concentration, which is somewhat more complicated. The usual approach is to find the first time derivative of the concentration, set it to zero, solve for the time at maximum, and then substitute this time back into the  $C(t)$  expression to find the peak concentration.<sup>2</sup> The peak, or maximum, concentration for some source behaviors may be as simple as "the value of the concentration at the end of the application period," because the shape of  $C(t)$  may be that of a buildup to an equilibrium (a leveling-off, or plateau), rather than the more usual sense of a peak, with  $C(t)$  increasing on one side and decreasing on the other. This situation is indicated when the expression for the time-at-maximum (which we obtain by setting the time derivative of  $C(t)$  to zero) has no nontrivial solution, that is, no solution other than time zero or infinity.

It is important to note that all these calculations are done on a *per-episode basis*; the SRD program must keep track of accumulating the exposures if there are multiple episodes in a year.

The sections below will simply present the results for each of the various source behaviors, after defining some parameters. The process outlined above was used to derive all these solutions. All these analytical solutions have been tested against numerical (Runge-Kutta) solutions, to verify their correctness. Attachment 3 shows plots of the sources and concentrations.

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<sup>2</sup> Any textbook on differential calculus will provide more background on this.

## DEFINITIONS AND SYMBOLS

The drying time "d" can be found from the Chinn drying time,<sup>3</sup> which is defined as the time for 90% of the material to be emitted, and for which we have an empirical relation, involving the molecular weight and vapor pressure. This expression applies only to wet applications. Chinn's equation for the drying time "d" can be stated:

$$d = \frac{145}{(Mwt P)^{0.9546}}$$

where Mwt is the molecular weight and P is the vapor pressure (torr). We have at time "d" a mass

$$M(d) = M_0 e^{-rd}$$

from which we can write

$$r = \frac{1}{d} \ln \left[ \frac{M_0}{M(d)} \right]$$

Note that, since  $M_0$  is always larger than  $M(d)$ , for any  $d > 0$ , the ratio in the log argument is always larger than unity, and so the log is nonnegative. Hence  $r$  is nonnegative. When we have 90% drying, which is what Chinn uses for the drying time "d", then  $M(d) = 0.1 * M_0$ , and

$$r = \frac{1}{d} \ln \left[ \frac{M_0}{0.1 M_0} \right]$$

or simply

$$r = \frac{1}{d} \ln [10]$$

These are the symbols used in the subsequent development:

t	time during application	E1	exposure during application
u	time during post-application	E2	exposure during post-application
q	application time	C1	concentration during application
V	room volume	C2	concentration during post-application
k	sum of first-order losses	S <sub>0</sub>	initial emission rate
r	parameter for exponential drying	Φ	constant factor, for emission rates
T	exposure integration period (one year, 8670 hr)		

<sup>3</sup> K. S. K. Chinn, A Simple Method for Predicting Chemical Agent Evaporation, TECOM Project No. 2-C0-210-049-008, U.S. Army Dugway Proving Ground, Dugway, UT, Sept. 1981.

## Pulse Application, Constant Emission Rate

This solution set applies for a source behavior which (1) instantaneously starts, at time zero, (2) stays at a constant level, and (3) shuts off instantly at the end of the application phase, or time "q." Products which might behave in this manner include aerosols, very-fast-drying wipe-on products, and laundry or dishwasher detergents. For this case we will not use a drying-time parameter, since we will assume instantaneous drying. Thus the situation where the drying parameter might equal the loss rate ( $\tau = k$ ) does not arise, so we need only find one set of solutions.

We use time "t" for the application phase, and time "u" for the post-application phase. This means that  $u = 0$  at time  $t = q$ , or the end of the application. Thus, on a continuous time scale, time  $u = 5$  hours would be  $t = 5 + q$  hours measured from the start of the episode. This use of a separate time variable for the post-application phase may seem complicated, but it actually simplifies the notation.

### Concentrations and Exposures

#### *Application Phase*

$$\frac{dC_1}{dt} = \Phi - k C_1$$

$$C_1(0) = 0$$

$$\Phi = \frac{\text{mass}}{q V}$$

$$C_1(t) = \frac{\Phi}{k} [1 - e^{-kt}]$$

$$E1(q) = \frac{\Phi}{k^2} [kq - (1 - e^{-kq})]$$

#### *Post-Application Phase*

$$\frac{dC_2}{du} = -k C_2$$

$$C_2(0) = C_1(q) = \frac{\Phi}{k} [1 - e^{-kq}]$$

$$C_2(u) = \left\{ \frac{\Phi}{k} [1 - e^{-kq}] \right\} e^{-ku}$$

$$E2(T) = \frac{\Phi}{k^2} [1 - e^{-kq} - e^{-kT} (1 - e^{-kq})]$$

#### *Total-Episode Exposure*

If we take T to infinity in the post-application exposure expression, and then add the during-application exposure, we get

$$Et(\infty) = \frac{\text{mass}}{k V}$$

a perhaps surprisingly simple result which we will see again, below. See Attachment 2 for a general derivation of this equation, which shows that, with some limitations, it applies for *any* source behavior.



## Peak Concentration

---

The application phase is, by inspection, a buildup to an equilibrium, so that there is no "peak." The *maximum* will be whatever concentration is attained at time  $t = q$ , in other words, at the end of the application. This may or may not be the equilibrium value, depending on  $k$  and the length of the application period. Since the source is zero in the post-application phase, the concentration monotonically decreases from the value it had at the end of the application. Therefore the peak, or maximum, concentration is

$$C_{peak} = \frac{\Phi}{k} [1 - e^{-kq}]$$

## Linear Ramp Application, Exponential Emission Rate

The source term behavior which appears in the ODE below was obtained by examination of the output from a numerical simulation of the continuous application of material, where once the material was applied to a differential area, that area's emission rate declined exponentially. We can either look up the drying-rate parameter "r" or calculate it using the expression given earlier which relates the drying time (which is calculated from an empirical relation involving the molecular weight and vapor pressure of the pollutant, the "Chinn equation") to the parameter r.

### Concentrations and Exposures

#### Application Phase

$$\frac{dC_1}{dt} = \Phi [1 - e^{-rt}] - kC_1$$

$$C_1(0) = 0$$

$$\Phi = \frac{\text{mass}}{qV}$$

#### Parameters-Not-Equal Solutions

$$C_1(t) = \Phi r \left\{ \frac{1}{rk} + \frac{e^{-rt}}{r(r-k)} - \frac{e^{-kt}}{k(r-k)} \right\}$$

$$El(q) = \frac{\Phi r}{(rk)^2} \{ rkq - k - r \} + \frac{\Phi r}{r-k} \left\{ \frac{e^{-kq}}{k^2} - \frac{e^{-rq}}{r^2} \right\}$$

#### Parameters-Equal Solutions

$$C_1(t) = \Phi \left\{ \frac{1}{k} - te^{-kt} - \frac{e^{-kt}}{k} \right\}$$

$$El(q) = \frac{\Phi}{k} \left\{ q + \frac{2+kq}{k} e^{-kq} - \frac{2}{k} \right\}$$

### Post-Application Phase

This source term is just the level the emission rate reaches at the end of time  $t = q$  (end of application), multiplied by an exponential-decrease factor. This behavior was observed in a numerical simulation of the continuous-application problem. We will need this repeatedly, below, so we define a new symbol for this quantity

$$\Psi = \Phi [1 - e^{-rq}]$$

The initial concentration  $C_2(0)$  is the value of the concentration reached at the end of the application time,  $t = q$ . Note that this  $C_2(0)$  will differ for the two parameter-equality cases, so they are given separately below.

$$\frac{dC_2}{du} = \Phi [1 - e^{-rq}] e^{-ru} - kC_2 = \Psi e^{-ru} - kC_2$$

$$C_2(0) = C_1(q)$$

#### Parameters-Not-Equal Solution

$$C_2(u) = \frac{\Psi + (r-k)C_2(0)}{r-k} e^{-ku} - \frac{\Psi}{r-k} e^{-ru}$$

$$C_2(0) = \Phi r \left\{ \frac{1}{rk} + \frac{e^{-rq}}{r(r-k)} - \frac{e^{-kq}}{k(r-k)} \right\}$$

$$E2(T) = \frac{\Psi + rC_2(0)}{rk} + \frac{\Psi}{r(r-k)} e^{-rT} - \frac{\Psi + (r-k)C_2(0)}{k(r-k)} e^{-kT}$$

$$E2(\infty) = \frac{\Psi + rC_2(0)}{rk}$$

#### Parameters-Equal Solution

$$C_2(u) = \{ C_2(0) + u\Psi \} e^{-ku}$$

$$C_2(0) = \Phi \left\{ \frac{1}{k} - q e^{-kq} - \frac{e^{-kq}}{k} \right\}$$

$$E2(T) = \frac{\Psi + kC_2(0)}{k^2} - \frac{\Psi + kC_2(0) + kT\Psi}{k^2} e^{-kT}$$

$$E2(\infty) = \frac{\Psi + kC_2(0)}{k^2}$$

### Total-Episode Exposure

It is a remarkable feature of this problem that the total-episode exposure, for both parameter-equality cases, reduces to the same simple expression. The details will be omitted here (they are available in MathCad documents), but if we make the appropriate substitutions for  $C(0)$  and  $\Psi$ , sum  $E1(q)$  and  $E2(\text{inf})$ , and simplify the resulting cumbersome expressions, we get this very simple result, which we also derived for the "pulse application, constant emission" case:

$$Et(\infty) = \frac{\text{mass}}{k V}$$

## Peak Concentration

---

### Application Phase

#### Parameters-Not-Equal Solution

To illustrate the more formal process of finding a peak, we will carry out the calculations for this one example. First we find the time derivative of the  $C(t)$ :

$$C_1(t) = \Phi r \left\{ \frac{1}{rk} + \frac{e^{-rt}}{r(r-k)} - \frac{e^{-kt}}{k(r-k)} \right\}$$
$$\frac{dC_1}{dt} = \Phi r \left\{ \frac{e^{-kt}}{r-k} - \frac{e^{-rt}}{r-k} \right\}$$

There is no nontrivial, that is, not zero or infinity, value of time at which this function evaluates to zero (the first derivative is zero at an extremum of a function). Hence there is no peak in this  $C(t)$  function, which we already knew, because it just builds up to an equilibrium. So the "peak" is the *maximum*  $C(t)$  attained at the end of time  $q$ . We will see below, however, that the post-application phase *does* have a maximum, and that it could occur exactly at  $t = q$  (in other words,  $u = 0$ ), so we cover the application-phase maximum as a special case (since the  $C(t)$  functions are continuous at  $t = q$ ).

### Post-Application Phase

We continue with the illustration of the peak-concentration calculation. We have

$$C_2(u) = \frac{\Psi + (r-k)C_2(0)}{r-k} e^{-ku} - \frac{\Psi}{r-k} e^{-ru}$$

which has time derivative

$$\frac{dC_2}{du} = \frac{r\Psi}{r-k} e^{-ru} - \frac{[\Psi + (r-k)C_2(0)]k}{r-k} e^{-ku}$$

and we can solve this for the time "u-max" at which this derivative is zero:

$$\alpha = \frac{k \{ \Psi + (r-k)C_2(0) \}}{r \Psi}$$

$$u_{\max} = \frac{-1}{r-k} \ln(\alpha)$$

To get the peak concentration, we just substitute u-max back into the C(u) function:

$$C_{\text{peak}} = \frac{\Psi + (r-k)C_2(0)}{r-k} e^{-ku_{\max}} - \frac{\Psi}{r-k} e^{-ru_{\max}}$$

#### Parameters-Equal Solution

If we carry out the same process, we get the same results for this case. The post-application peak applies, which is:

$$u_{\max} = \frac{1}{k} - \frac{C_2(0)}{\Psi}$$

$$C_{\text{peak}} = [C_2(0) + u_{\max} \Psi] e^{-ku_{\max}}$$

## Linear Ramp Application, Constant Emission Rate

This source term exhibits three behaviors: (1) linear ramp up; (2) constant; (3) linear ramp down. This comes from a numerical simulation of the behavior of continuously-applied material which, once applied, emits at a constant rate for a fixed time, then instantly turns off. See the Technical Note in Attachment 1 for more details. For this case we also have the complication that the application time might be larger or smaller than the dry time; we have to check this and just reverse the definitions of these parameters in the equations; we don't need *separate* solutions, fortunately. We also don't have the situation where an exponential drying parameter could be equal to the first-order loss rate, so that simplifies things.

See Attachment 1 for a detailed derivation of the following expressions. This attachment will serve as an illustration of the process of deriving all these results. Details of all derivations are available on request (they are in other MathCad documents).

### Concentrations and Exposures

#### Application Phase

$$\frac{dC_1}{dt} = \frac{\Phi t}{d} - k C_1$$

$$\Phi = \frac{\text{mass}}{qV}$$

$$C_1(0) = 0$$

$$C_1(t) = \frac{\Phi}{kd} \left\{ t - \frac{1}{k} [1 - e^{-kt}] \right\}$$

$$\frac{dC_2}{dt_2} = \Phi - k C_2$$

$$C_2(0) = C_1(d)$$

$$C_2(t_2) = \frac{\Phi}{k^2 d} \left\{ kd + e^{-k(t_2+d)} - e^{-kt_2} \right\}$$

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*Post-Application Phase*

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$$\frac{dC_3}{dt_3} = \Phi \left[ 1 - \frac{t_3 - q}{d} \right] - k C_3$$

$$C_3(0) = C_2(q - d)$$

$$C_3(t_3) = \frac{\Phi}{k^2 d} \left\{ 1 + kd - kt_3 + e^{-k(t_3+q)} - e^{-kt_3} - e^{k(-t_3-q+d)} \right\}$$

$$\frac{dC_4}{dt_4} = -k C_4$$

$$C_4(0) = C_3(d)$$

$$C_4(t_4) = \frac{\Phi}{k^2 d} \left\{ 1 - e^{-kd} - e^{-kq} + e^{-k(d+q)} \right\} e^{-kt_4}$$

The attached MathCad document (Attachment 1) shows the complete derivation of the exposures, which are cumbersome to type, and for the peak. The final total-exposure result is the same simple expression we have already seen.

*Total-Episode Exposure*

$$Et(\infty) = \frac{mass}{k V}$$

**Peak Concentration**

---

$$t_{max} = \frac{1}{k} \ln \left[ \frac{e^{kd} + e^{kq} - 1}{e^{kq}} \right]$$

$$C_{peak} = \frac{\Phi}{k^2 d} \left\{ 1 + kd - kt_{max} + e^{-k(t_{max}+q)} - e^{-kt_{max}} - e^{k(-t_{max}-q+d)} \right\}$$

## Instantaneous Application, Exponential Emission Rate

This will be the case for building materials or furnishings, carpets, etc., which are by assumption instantly "applied" (installed) in the room, and then their emissions decay off exponentially over a long time, on the order of many months, if not years. Note that we cannot use the concentration integral out to infinity as representing the exposure for a year, for these slowly-decaying materials. We use  $S_0$  for the emission rate at the time the material was introduced into the system, that is, time zero. The exposure-evaluation interval runs from time "t1" to time "t2," where t1 can be zero.

$$\frac{dC}{dt} = \frac{S_0}{V} e^{-rt} - kC$$

$$C(0) = 0$$

### Concentrations and Exposures

---

#### Parameters-Not-Equal Solutions

$$C(t) = \frac{S_0}{V(r-k)} [e^{-kt} - e^{-rt}]$$

#### Parameters-Equal Solutions

$$C(t) = \frac{S_0}{V} t e^{-kt}$$

$$E(t_1, t_2) = \frac{S_0}{V(r-k)} \left\{ \frac{1}{r} [e^{-rt_2} - e^{-rt_1}] - \frac{1}{k} [e^{-kt_2} - e^{-kt_1}] \right\} \quad E(t_1, t_2) = \frac{S_0}{Vk^2} \{ (1 + kt_1)e^{-kt_1} - (1 + kt_2)e^{-kt_2} \}$$

### Peak Concentration

---

#### Parameters-Not-Equal Solution

$$t_{\max} = \frac{1}{r-k} \ln \left[ \frac{r}{k} \right]$$

$$C_{\text{peak}} = \frac{S_0}{Vr} \left[ \frac{r}{k} \right]^{\frac{k}{k-r}}$$

#### Parameters-Equal Solution

$$t_{\max} = \frac{1}{k}$$

$$C_{\text{peak}} = \frac{S_0}{Vk} e^{-1}$$



**Attachment 1**

**MathCad derivation document and GEOMET Technical Note**

**pertaining to**

**Linear Ramp Application, Constant Emission Rate Solutions**

**SRD: solutions for trapezoidal source (continuous application, constant emission)**

WCEvans Dec 16, 1993

We have the source behavior in three phases: (1) linear ramp up; (2) constant; (3) linear ramp down. That is, the mg/min rate itself is increasing, constant, and decreasing. This comes from the SCIES work, a numerical sim of the behavior of the "squares" as they turn on, emit at a flat rate, and instantly turn off. Let  $d$  = dry time;  $q$  = applic time. If  $q > d$  then use the expressions below; if  $d > q$  then just exchange these parameters.

The source term  $s(t)$  is discontinuous, but piecewise continuous. There are three segments:

$$\text{mass} := 1 \quad q := 60 \quad V := 1 \quad d := 20 \quad k := \frac{1}{60} \quad S0 := \frac{\text{mass}}{q \cdot V}$$

For  $0 \leq t \leq d$

$$s1(t) := S0 \cdot \frac{t}{d}$$

for  $d \leq t \leq q$

$$s2(t) := S0$$

for  $q \leq t \leq q+d$

$$s3(t) := S0 \cdot \left(1 - \frac{t - q}{d}\right)$$

and for  $t > q+d$

$$s4(t) := 0$$

Note that, if  $q=d$  exactly, the trapezoidal shape of this function becomes a triangle.

Now we need to find the  $C(t)$  solutions for a single-compartment system. Use the conv integral:

PHASE 1 =====

$$C1(t) = \int_0^t S0 \cdot \frac{\text{tau}}{d} \cdot \exp(-k \cdot (t - \text{tau})) \, d\text{tau}$$

$$C1(t) := \left( \frac{1}{k \cdot d} \cdot t + \frac{-1 + \exp(-k \cdot t)}{d \cdot k^2} \right) \cdot S0$$

This would just keep building up forever, except that  $t$  is limited to time " $d$ ." The exposure integral up thru time  $d$  is:

$$E1(d) = \int_0^d \left( \frac{1}{k \cdot d} \cdot t + \frac{-1 + \exp(-k \cdot t)}{d \cdot k^2} \right) \cdot S0 \, dt$$

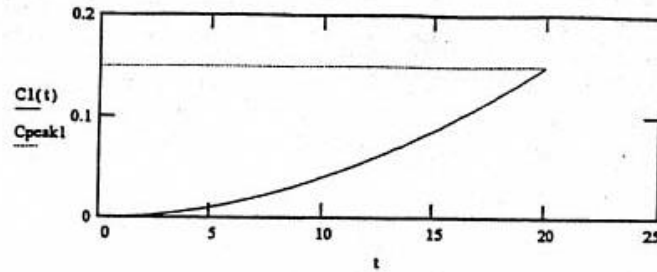
$$E1(d) := \frac{1}{2} \cdot S0 \cdot \frac{-2 \cdot k \cdot d - 2 \cdot \exp(-k \cdot d) + k^2 \cdot d^2 + 2}{k^3 \cdot d}$$

The peak will just be the conc at time  $d$ , since the source term keeps increasing throughout the interval (no need to take derivatives, etc.)

$$C_{\text{peak1}} := (k \cdot d - 1 + \exp(-k \cdot d)) \cdot \frac{S0}{k^2 \cdot d}$$

$$t := 0..1..d$$

$$C_{\text{peak1}} = 0.15$$



PHASE 2 =====

Now we have a nonzero IC: the C(t) at the end of the previous phase.

$$C_2(t_2) := C_1(d) \cdot \exp(-k \cdot t_2) + \int_0^{t_2} S_0 \cdot \exp(-k \cdot (t_2 - \tau)) \, d\tau$$

$$C_2(t_2) := \left[ (k \cdot d - 1 + \exp(-k \cdot d)) \cdot \frac{S_0}{k^2 \cdot d} \right] \cdot \exp(-k \cdot t_2) + \frac{1}{k} \cdot S_0 - \frac{\exp(-k \cdot t_2) \cdot S_0}{k} \quad C_2(t_2) := S_0 \cdot \frac{-\exp(-k \cdot t_2) + \exp(-k \cdot (t_2 + d)) + k \cdot d}{k^2 \cdot d}$$

Now for the integral (time  $t_2$  runs from zero to  $q-d$  minutes):

$$E_2 = \int_0^{q-d} S_0 \cdot \frac{-\exp(-k \cdot t_2) + \exp(-k \cdot (t_2 + d)) + k \cdot d}{k^2 \cdot d} \, dt_2$$

$$E_2 := \frac{-S_0 \cdot d + q \cdot S_0}{k} + (\exp(-k \cdot q) + k \cdot d) - \exp(-k \cdot q) - 1 + \exp(-k \cdot d) \cdot \frac{S_0}{d \cdot k^3}$$

Now for the peak. The derivative is

$$S_0 \cdot \frac{k \cdot \exp(-k \cdot t_2) - k \cdot \exp(-k \cdot (t_2 + d))}{k^2 \cdot d}$$

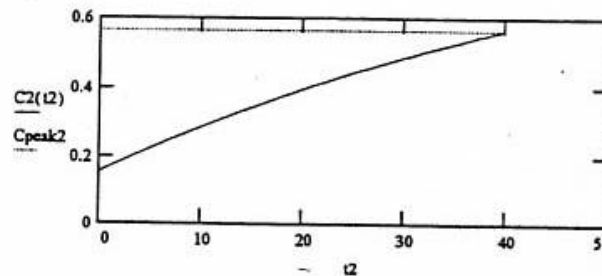
which has no nontrivial solution when equated to zero. So there is no peak, as such, in this phase, either. The maximum value of  $C_2(t_2)$  will be that value attained at the end of time  $t_2$ , or time  $q-d$  in  $t_2$ -units, which is

$$C_{\text{peak2}} = S_0 \cdot \frac{-\exp(k \cdot (-q + d)) + \exp(-k \cdot q) + k \cdot d}{k^2 \cdot d}$$

$$t_2 = 0..1..q-d$$

$$C_2(0) = 0.15$$

$$C_{\text{peak2}} = 0.563$$



PHASE 3

Now the source decreases. Again we have a nonzero IC. In units of  $t_3$ -time,  $q$  is zero so we don't subtract it in the  $S(t)$ .

$$C_3(t_3) := C_2(q - d) \cdot \exp(-k \cdot t_3) + \int_0^{t_3} S_0 \cdot \left(1 - \frac{\tau}{d}\right) \cdot \exp(-k \cdot (t_3 - \tau)) \, d\tau$$

$$C_3(t_3) := S_0 \cdot \frac{-\exp(k \cdot (-t_3 - q + d)) + \exp(-k \cdot (t_3 + q)) + k \cdot d - k \cdot t_3 + 1 - \exp(-k \cdot t_3)}{k^2 \cdot d}$$

Now we do the exposure, where  $t_3$  runs from 0 to  $d$  units of time:

$$E_3 := \int_0^d S_0 \cdot \frac{-\exp(k \cdot (-t_3 - q + d)) + \exp(-k \cdot (t_3 + q)) + k \cdot d - k \cdot t_3 + 1 - \exp(-k \cdot t_3)}{k^2 \cdot d} \, dt_3$$

$$E_3 := \frac{-1}{2} \cdot \left[ -4 \cdot \exp(-k \cdot q) + 2 \cdot \exp(-k \cdot (d + q)) - 2 \cdot k \cdot d - k^2 \cdot d^2 - 2 \cdot \exp(-k \cdot d) + 2 \cdot \exp(k \cdot (-q + d)) + 2 \right] \cdot \frac{S_0}{k^3 \cdot d}$$

Now for the peak. The time derivative is

$$S_0 \cdot \frac{k \cdot \exp(k \cdot (-t_3 - q + d)) - k \cdot \exp(-k \cdot (t_3 + q)) - k + k \cdot \exp(-k \cdot t_3)}{k^2 \cdot d}$$

which leads to

$$t_{3\max} := \frac{-\ln\left[\frac{\exp(k \cdot q)}{(\exp(k \cdot d) - 1 + \exp(k \cdot q))}\right]}{k}$$

and so the peak is

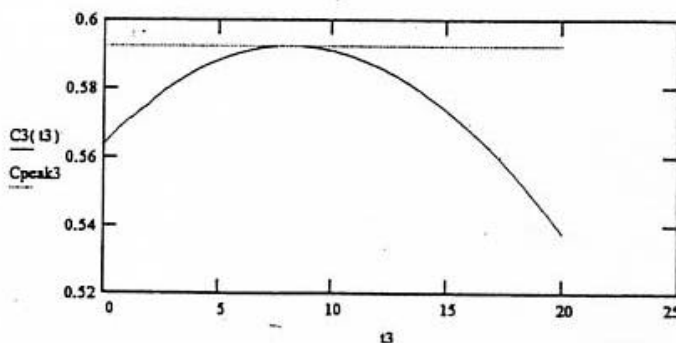
$$C_{\text{peak}3} := S_0 \cdot \frac{-\exp(k \cdot (-t_{3\max} - q + d)) + \exp(-k \cdot (t_{3\max} + q)) + k \cdot d - k \cdot t_{3\max} + 1 - \exp(-k \cdot t_{3\max})}{k^2 \cdot d}$$

$t_3 = 0, \dots, d$

$$C_3(0) = 0.563$$

$$C_3(d) = 0.538$$

$$C_{\text{peak}3} = 0.592$$



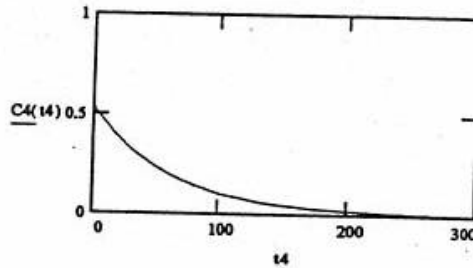
PHASE 4

This is just the mopping up after the source is zero, hence it's just the decay of the IC, no source. Note that time t3 here is time "d" in its units so that substitution has been made. This exposure integral we can take to infinity.

$$C4(t4) := -S0 \cdot (\exp(-k \cdot q) - \exp(-k \cdot (d+q)) - 1 + \exp(-k \cdot d)) \cdot \frac{\exp(-k \cdot t4)}{(k^2 \cdot d)}$$

$$t4 := 0, 2, \dots, 300$$

$$C4(0) = 0.538$$



The exposure is

$$E4(T) := \int_0^T \left[ -S0 \cdot (\exp(-k \cdot q) - \exp(-k \cdot (d+q)) - 1 + \exp(-k \cdot d)) \cdot \frac{\exp(-k \cdot t4)}{(k^2 \cdot d)} \right] dt4$$

$$E4(T) := \frac{1}{k^3} \cdot \exp(-k \cdot T) \cdot S0 \cdot \frac{(\exp(-k \cdot q) - \exp(-k \cdot d - k \cdot q) - 1 + \exp(-k \cdot d))}{d} - \frac{1}{k^3} \cdot S0 \cdot \frac{(\exp(-k \cdot q) - \exp(-k \cdot d - k \cdot q) - 1 + \exp(-k \cdot d))}{d}$$

Taking the limit as T gets large, we get

$$E4(\infty) := \frac{-1}{k^3} \cdot S0 \cdot \frac{(\exp(-k \cdot q) - \exp(-k \cdot d - k \cdot q) - 1 + \exp(-k \cdot d))}{d}$$

Now let's add up the exposures and see if they simplify.

$$\begin{aligned} & \frac{1}{2} \cdot S0 \cdot \frac{-2 \cdot k \cdot d - 2 \cdot \exp(-k \cdot d) + k^2 \cdot d^2 + 2}{k^3 \cdot d} \dots \\ & + \frac{1}{2} \cdot \left[ -4 \cdot \exp(-k \cdot q) + 2 \cdot \exp(-k \cdot (d+q)) - 2 \cdot k \cdot d - k^2 \cdot d^2 - 2 \cdot \exp(-k \cdot d) + 2 \cdot \exp(k \cdot (-q+d)) + 2 \right] \cdot \frac{S0}{k^3 \cdot d} \dots \\ & + \left( \frac{-1}{k^3} \cdot S0 \cdot \frac{\exp(-k \cdot q) - \exp(-k \cdot d - k \cdot q) - 1 + \exp(-k \cdot d)}{d} \right) \dots \\ & + \left[ \frac{-S0 \cdot d + q \cdot S0}{k} + (\exp(-k \cdot q + k \cdot d) - \exp(-k \cdot q) - 1 + \exp(-k \cdot d)) \cdot \frac{S0}{d \cdot k^3} \right] \end{aligned}$$

which, amazingly enough, reduces to

$$\frac{1}{k} \cdot q \cdot S0 \qquad \frac{\text{mass}}{kV}$$

# GEOMET Technical Note

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## Continuous-Application Source-Term Development

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August 1992

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## CONTINUOUS-APPLICATION SOURCE-TERM DEVELOPMENT

William C. Evans

August 24, 1992

We have that

- there is an application time over which all the material is applied ( $T$ )
- there is some total amount of material to be emitted ( $M$ )
- the time period of interest is that over which all of the mass  $M$  is emitted ( $T_{\max}$ )
- the material is released at a constant rate over a fixed time interval ( $\tau$ )

Thus, for a small differential area  $dA$ , we will let the portion of the mass  $M$  which is applied to this  $dA$  be applied instantaneously; material is then released at a constant rate until time  $\tau$ , at which time the area  $dA$  instantaneously stops emitting. Now consider a finite number of  $dA$ 's, say  $N$ . Partition the application time equally among the  $N$  areas:

$$dt = T / N$$

with  $dt$  the *time lag* between applications (recall that all the material is instantly applied to each area  $dA$ ). That is, we instantly apply to the area  $dA$  an amount of material

$$dm = M / N$$

and then wait  $dt$  minutes before applying material to the next  $dA$ . This simulates the finite time it really takes to apply the material to the area. This is very crude when  $N$  is small, but as  $N$  increases, the approximation to reality gets much more reasonable, because the size of each  $dA$  decreases, as does the time lag between  $dA$ 's, coming closer to a continuous application, in the limit as  $N$  gets very large. (When  $N$  is small we can have some interesting and complex system responses, because the source can look like, e.g., a square-wave pulse train, depending on the relations between the lag time and the emission time.)

So we have a set of  $N$  small areas which "turn on" in succession,  $dt$  minutes apart, and which "turn off" at the end of elapsed on-time  $\tau$ , and while "on" they emit material at a constant rate of

$$dS = dm / \tau$$

The "turn-on-time" and "turn-off-time" of the  $i$ -th  $dA$  are, respectively,

$$(i - 1) dt$$

$$(i - 1) dt + \tau$$

The total source term at a given time is, of course, just the sum of all the *active*  $dA$ 's: those that have already been applied, and which have not yet run out of emission time.

These ideas were coded into a QuickBasic (QB) program, which calculates this source term (emission rate) dynamically, and uses the results to drive a two-compartment coupled system, which is solved using a fourth-order Runge-Kutta (RK) implementation. The source term and response in the two compartments (the source room and the "rest-of-house") are plotted as a function of time. The program permits the adjustment of "house" exchange rates,  $M$ ,  $N$ ,  $T$ ,  $\tau$ ,  $T_{\max}$

Examination of the output of this simulation revealed that the continuous-application source term can be represented by the following expressions. We have two cases: (1) the application time is greater than or equal to the emission time; (2) it is less.

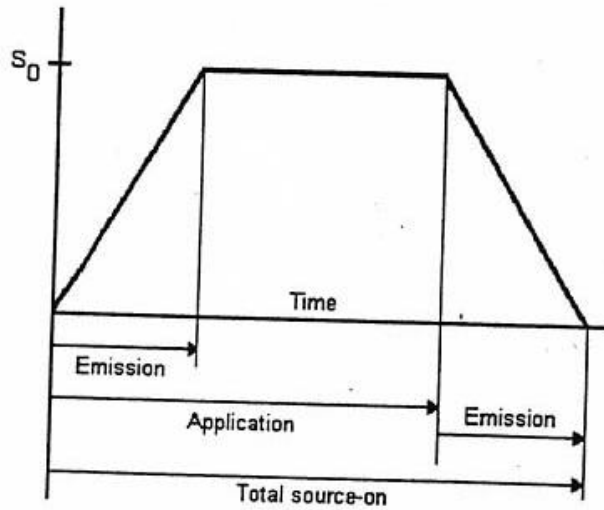
CASE 1  $T \geq \tau$   $S_0 = M / T$

$$\begin{array}{ll} S_0 [t/\tau] & 0 < t < \tau \\ S_0 & \tau < t < T \\ S_0 [1 - (t-T)/\tau] & T < t < T+\tau \end{array}$$

CASE 2  $T < \tau$   $S_0 = M / \tau$

$$\begin{array}{ll} S_0 [t/T] & 0 < t < T \\ S_0 & T < t < \tau \\ S_0 [1 - (t-\tau)/T] & \tau < t < T+\tau \end{array}$$

Thus, we have a discontinuous (but piecewise-continuous) source term, or driving function. The shape of this function is that of a trapezoid, except when  $\tau = T$  exactly, when we have a triangle. Below is a sketch of this profile (reverse the "emission" and "application" labels if  $\tau > T$ ).



Source-term profile: continuous application  
constant emission rate

The relations above were coded into the QB program, and checked against the discrete case, with  $N$  large (several hundred). The agreement was excellent. Non-constant emissions can also be handled by this approach, by allowing each  $dA$  to have some more complicated behavior while it is "on." For example, a primitive attempt was made to model "saturation" by having each  $dA$  ramp down its emission rate linearly as the application-room concentration ( $x_1$ ) increased:



$$dS(t) = (dm / \tau) [1 - x1(t) / C_{sat}]$$

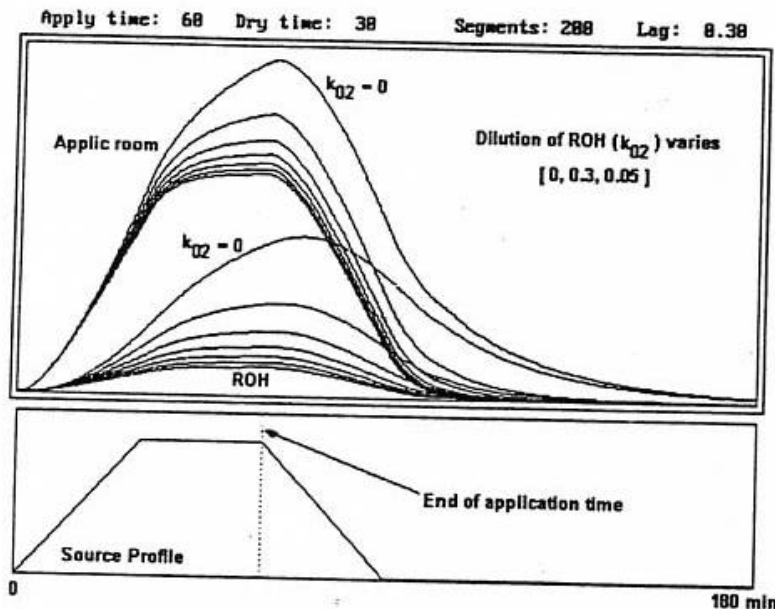
where  $C_{sat}$  is the concentration level above which the dA stops emitting. This produces a source-term profile and compartment responses which look plausible, but there is no physical basis for a linear ramp-down behavior! This profile cannot be represented by piecewise-linear segments, so this "solution" will have to be done with a discrete approximation.

There is a mathematical technique for finding an analytical solution for the two-compartment system to the segmented source term for the constant-emission case. It involves the use of transfer functions and Laplace transforms. We could

- find the transfer function matrix for the system (2x1 here);
- find the Laplace transform of the driving function (source term);
- multiply these;
- find the inverse Laplace transforms of the two products (one for each compartment).

The transfer functions for this system we can easily find<sup>1</sup>, or we could just look them up<sup>2</sup>. Finding the transform for the piecewise-continuous driving function, however, is a bit tricky. We can use the Heaviside function and the Second Shifting Theorem<sup>3</sup> or tables of transform pairs<sup>4</sup>. We can do this work, using DERIVE (a symbolic math program), but we will still need to find the inverse transform by hand. This was done, up to the point of finding the inverse, and the result is very messy, and was dropped. We have a perfectly good solution in the RK program, so there's no point in grinding through these transforms to get an analytical solution. (Especially since all that was requested for this task was the source term dynamics-not the complete system-response function.)

Below are two sample run screens from the QB programs; the first is without "saturation," the second is with. The scales are arbitrary: in the first plot the ROH volume is twice that of the application room; in the second plot the volumes are equal.



<sup>1</sup> Godfrey, K., *Compartmental Models and Their Applications*, Academic, 1983, pp22-28.

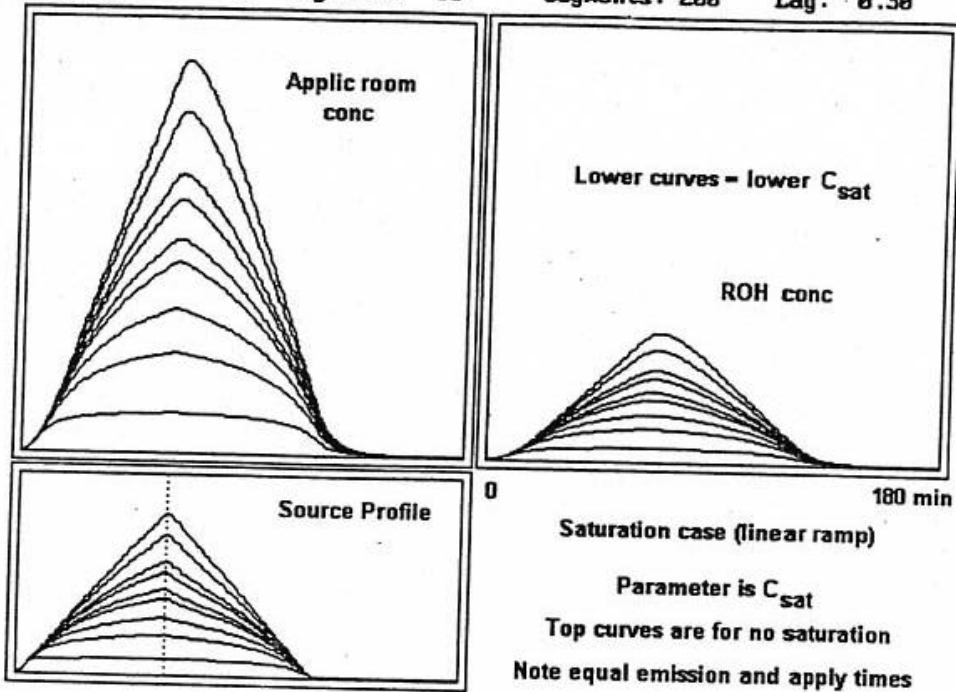
<sup>2</sup> *Ibid*, p41.

<sup>3</sup> O'Neil, P. V., *Advanced Engineering Mathematics*, 3rd Ed., Wadsworth, 1991, Section 4.4.

<sup>4</sup> Tuma, J. J., *Engineering Mathematics Handbook*, 3rd Ed., McGraw-Hill, 1987, pp242-247.

Apply time: 60 Dry time: 60

Segments: 200 Lag: 0.30



Note that the system responses pretty much "echo" the driving function, in this particular example. This behavior can change as the various mass-transfer-rate parameters of the system are adjusted. Note also the lag in the compartment concentrations—they are still nonzero after the source has terminated. This lag depends on the "speed" of the system, as determined by the rate parameters. As we would expect, with a small saturation concentration (lower curves), the resulting compartment concentrations are dramatically lower than without a saturation effect (top curve).

**Attachment 2**

**General Proof for "M/kV" Expression**

## Long-Term Concentration Integral: Derivation of Simple-Form Solution

W. C. Evans March 18, 1994

We have seen the result for the total-episode exposure

$$E(\infty) = \frac{M}{kV}$$

several times in the development of the SRD equations, where it has been derived for different source behaviors. It has also been observed numerically in the "SRD" interactive program, where the exposure remains constant while the drying time is varied. This occurs, of course, because the long-term exposure does not depend on the drying time, in the expression above. We might ask if there is some *general* way to analytically prove that this elegantly simple expression applies to any arbitrary source behavior, and what limitations, if any, need be applied.

It turns out that there is a theorem, called "Hamilton's Formula," in compartmental modeling<sup>1</sup>, which can be used to derive a general proof of this expression. Hamilton's formula is as follows:

$$k = \frac{\int_0^T u(\tau) d\tau}{\int_0^{\infty} x(\tau) d\tau}$$

where  $k$  is the first-order loss,  $u(t)$  is the time-dependent source term, and  $x(t)$  is the time-dependent mass in the compartment. (For a derivation of this very useful expression, see Anderson.) We recognize that the mass emitted by the source in a finite time  $T$  is just

$$M = \int_0^T u(\tau) d\tau$$

so that, also using the fact that the compartmental mass is the concentration times the volume, we can write

$$V \int_0^{\infty} C(\tau) d\tau = \frac{M}{k}$$

and so

$$\boxed{\int_0^{\infty} C(\tau) d\tau = \frac{M}{kV} = E(\infty)}$$

<sup>1</sup> Anderson, D. H., *Compartmental Modeling and Tracer Kinetics*, Springer-Verlag, 1983, pp110-111.

What conditions do we need in order for this to work? Following Anderson (p111) *the compartmental mass, or concentration, must approach zero*. That means that the source must decrease "fast enough" or "soon enough" in the time period of interest to lead to a small concentration by the end of the integration time.

In the limit of *no* loss, we have a closed system, which violates one assumption under which Hamilton's formula was derived. If the loss rate is nonzero, but small, then we need to extend our integration time out far enough that the concentration would approach zero; the exposure will be large for this case, since the concentration will stay at a high level for a long time.

For the SRD context, the product applications are all short compared to the exposure-integration time of one year, so that this simple expression is applicable. This is a great help in coding the program, needless to say. On the other hand, for materials like wood products or furnishings, the emission continues throughout the year and all the available pollutant mass is not released within the integration time, i.e., within the year. Thus, since the source will be active throughout the entire year, the concentration due to that source will not have decreased to near zero by the end of the year. For this case, we need to use another expression for the exposure, which has been derived.

In summary, this expression can be used for the long-term exposure when:

- the system is linear;
- there is a zero initial condition;
- there are no traps in the system;
- the system is open, i.e., there is at least one nonzero loss rate to the environment;
- all the mass in the source is released within the exposure time T;
- the exposure period T is long enough for the concentration to approach zero.

For consumer products we meet these conditions, for building materials and furnishings we do not, for an annual exposure.

Historical footnote:

This expression was derived shortly after it was observed that the "SRD" interactive demo program, which implemented (for testing purposes) the time-dependent concentration equations for one source behavior, was producing exposures which scaled linearly with the ACH. It seemed like this should have been an exponential dependence. The exposures in that program were calculated via a trapezoidal numerical integration of the  $C(t)$ , so explicit solutions were not yet available for the exposure. When these were worked out, the simple expression in question fell out of the simplification of a bunch of complicated equations. By inspection, we see that the long-term exposure does indeed scale linearly with the first-order loss parameter  $k$ ; that is, doubling  $k$  will halve the exposure, as the program had indicated.

**ATTACHMENT 3**

**Plots of Concentrations and Sources**

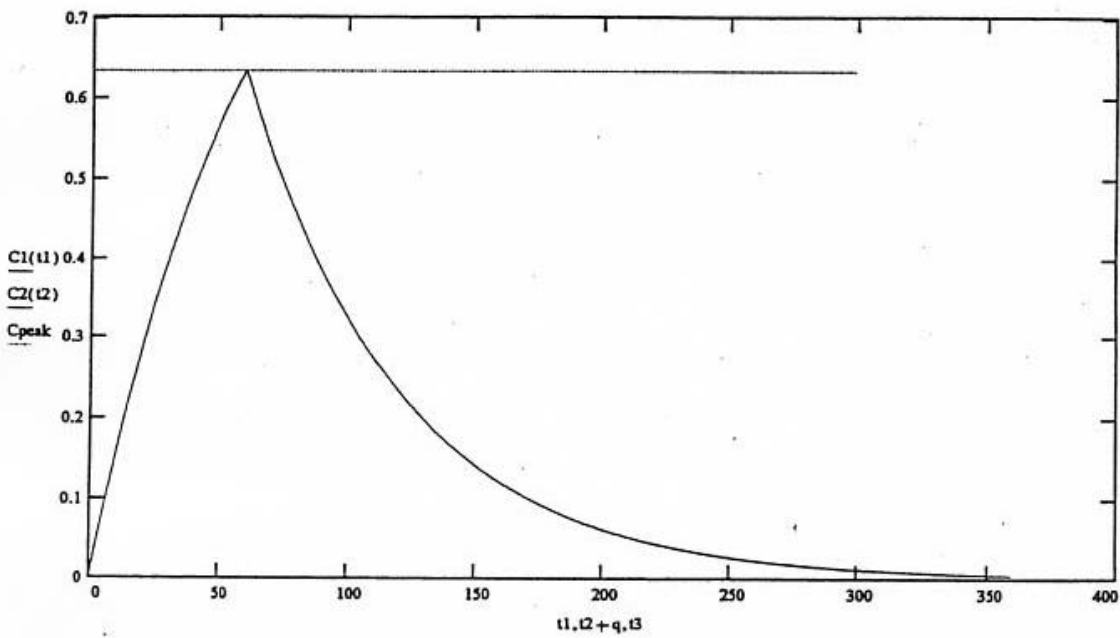
## SRD: Plots of Concentration Functions

William C. Evans    December 21, 1993

### PULSE APPLICATION, CONSTANT EMISSION RATE

$$\text{mass} := 1 \quad k := \frac{1}{60} \quad q := 60 \quad V := 1 \quad S0 := \frac{\text{mass}}{q \cdot V} \quad t1 := 0, .1, q \quad t2 := 0, .1, 300 \quad t3 := 0, 300$$

$$C1(t1) := \frac{S0}{k} \cdot (1 - \exp(-k \cdot t1)) \quad C2(t2) := S0 \cdot \frac{\exp(-k \cdot t2)}{k} \cdot (1 - \exp(-k \cdot q)) \quad C_{\text{peak}} := \frac{S0}{k} \cdot (1 - \exp(-k \cdot q))$$



Here is a test of the "Evans-Guo" equation; we'll numerically integrate the  $C(t)$ , taking the post-application integral out to an arbitrarily large value of time:

$$E1 = \int_0^q C1(t1) dt1 \quad E2 = \int_0^{500} C2(t2) dt2 \quad E1 = 22.073 \quad E2 = 37.918 \quad E1 + E2 = 59.991 \quad \frac{\text{mass}}{k \cdot V} = 60$$

## LINEAR RAMP APPLICATION, EXPONENTIAL EMISSION RATE

### PARAMETERS NOT EQUAL

$$\text{mass} := 1 \quad V := 1 \quad q := 60 \quad d := 30 \quad r := \frac{\ln(10)}{d} \quad S0 := \frac{\text{mass}}{q \cdot V} \quad t1 := 0, \dots, q$$

$$t2 := 0, \dots, 200$$

$$C1(t1) := S0 \cdot r \left[ \frac{1}{r \cdot k} + \frac{\exp(-r \cdot t1)}{r(r-k)} - \frac{\exp(-k \cdot t1)}{k(r-k)} \right]$$

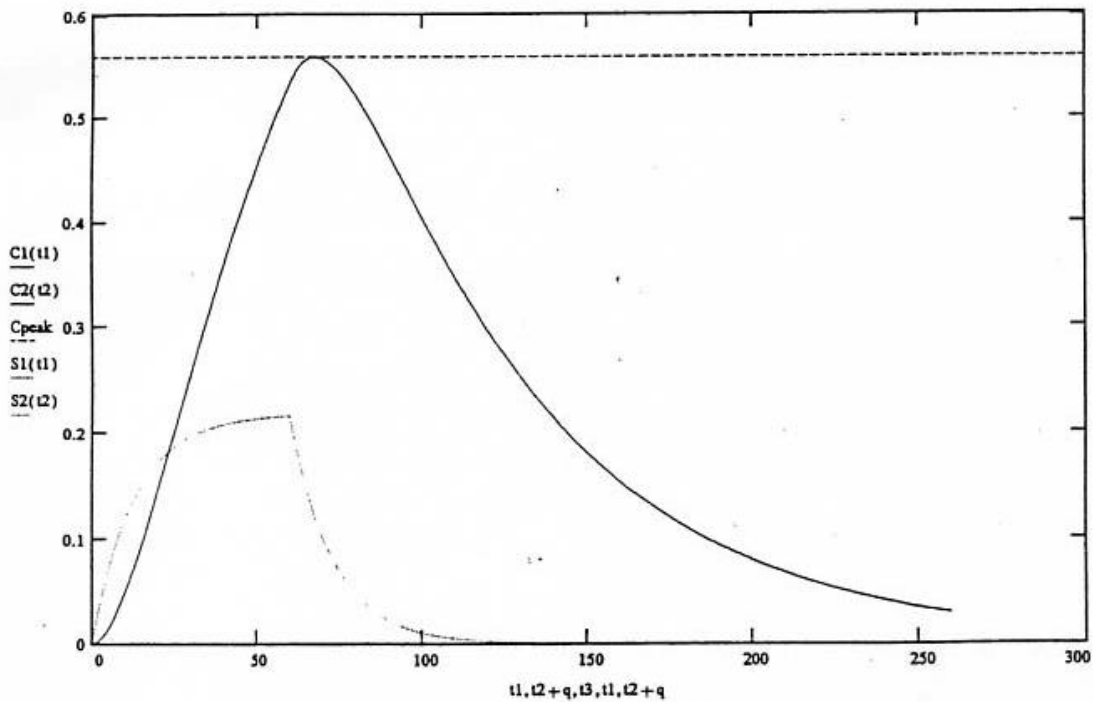
$$t3 := 0, \dots, 300$$

$$C20 := S0 \cdot r \left[ \frac{1}{r \cdot k} + \frac{\exp(-r \cdot q)}{r(r-k)} - \frac{\exp(-k \cdot q)}{k(r-k)} \right] \quad S2 := S0 \cdot (1 - \exp(-r \cdot q))$$

$$C2(t2) := \frac{S2 + (r-k) \cdot C20}{r-k} \cdot \exp(-k \cdot t2) - \frac{S2}{(r-k)} \cdot \exp(-r \cdot t2)$$

$$\alpha := k \cdot \frac{S2 + (r-k) \cdot C20}{r \cdot S2} \quad t2_{\max} := -\frac{1}{r-k} \cdot \ln(\alpha) \quad C_{\text{peak}} := \frac{S2 + (r-k) \cdot C20}{r-k} \cdot \exp(-k \cdot t2_{\max}) - \frac{S2}{(r-k)} \cdot \exp(-r \cdot t2_{\max})$$

$$S1(t1) := \frac{S0}{r} \cdot (1 - \exp(-r \cdot t1)) \quad S2(t2) := \frac{S0}{r} \cdot (1 - \exp(-r \cdot q)) \cdot \exp(-r \cdot t2)$$



$$E1 = \int_0^q C1(t1) dt1 \quad E2 = \int_0^{1000} C2(t2) dt2 \quad E1 + E2 = 60 \quad \frac{\text{mass}}{k \cdot V} = 60$$



PARAMETERS EQUAL

$$r := k$$

$$C1(t1) := S0 \cdot \left( \frac{1}{k} - t1 \cdot \exp(-k \cdot t1) - \frac{\exp(-k \cdot t1)}{k} \right)$$

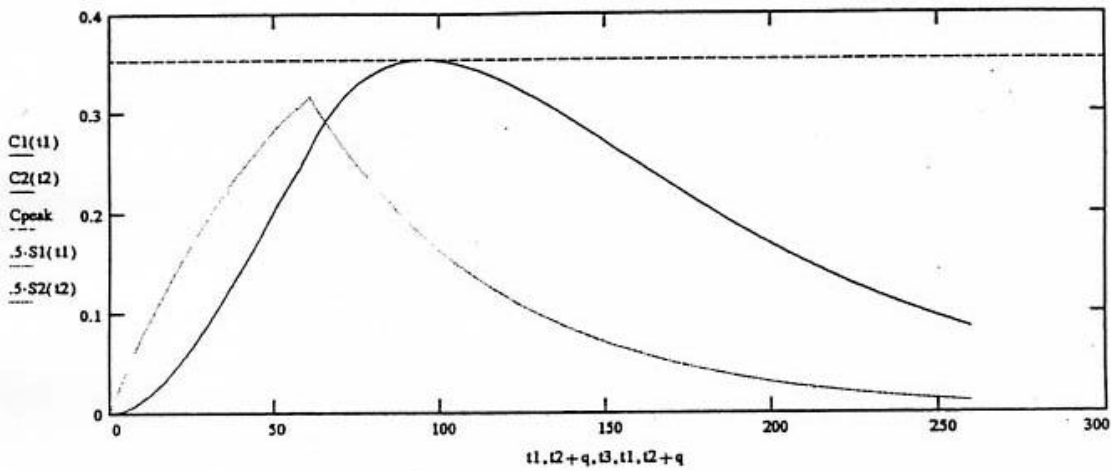
$$C20 := S0 \cdot \left( \frac{1}{k} - q \cdot \exp(-k \cdot q) - \frac{\exp(-k \cdot q)}{k} \right) \quad S2 := S0 \cdot (1 - \exp(-r \cdot q)) \quad C2(t2) := (C20 + t2 \cdot S2) \cdot \exp(-k \cdot t2)$$

$$t2max := \frac{1}{k} - \frac{C20}{S2}$$

$$Cpeak := (C20 + t2max \cdot S2) \cdot \exp(-k \cdot t2max)$$

$$S1(t1) := \frac{S0}{r} \cdot (1 - \exp(-r \cdot t1))$$

$$S2(t2) := \frac{S0}{r} \cdot (1 - \exp(-r \cdot q)) \cdot \exp(-r \cdot t2)$$



$$E1 := \int_0^q C1(t1) dt1$$

$$E2 := \int_0^{1000} C2(t2) dt2$$

$$E1 + E2 = 60$$

$$\frac{\text{mass}}{k \cdot V} = 60$$

### LINEAR RAMP APPLICATION, CONSTANT EMISSION RATE

$$\begin{array}{llllll}
 \text{mass} := 1 & V := 1 & q := 60 & d := 20 & S0 := \frac{\text{mass}}{q \cdot V} & t1 := 0, 2 \dots d & t2 := 0, 2 \dots q - d \\
 & & & & & t3 := 0, 2 \dots d & t4 := 0, 2 \dots 200 \\
 & & & & & & t5 := 0 \dots 300
 \end{array}$$

$$C1(t1) := \frac{S0}{k \cdot d} \left[ t1 - \frac{1}{k} (1 - \exp(-k \cdot t1)) \right]$$

$$S1(t1) := S0 \frac{t1}{d}$$

$$C2(t2) := \frac{S0}{k^2 \cdot d} (k \cdot d + \exp(-k \cdot (t2 + d)) - \exp(-k \cdot t2))$$

$$S2(t2) := S0$$

$$C3(t3) := \frac{S0}{k^2 \cdot d} (1 + k \cdot d - k \cdot t3 + \exp(-k \cdot (t3 + q)) - \exp(-k \cdot t3) - \exp(k \cdot (-t3 - q + d)))$$

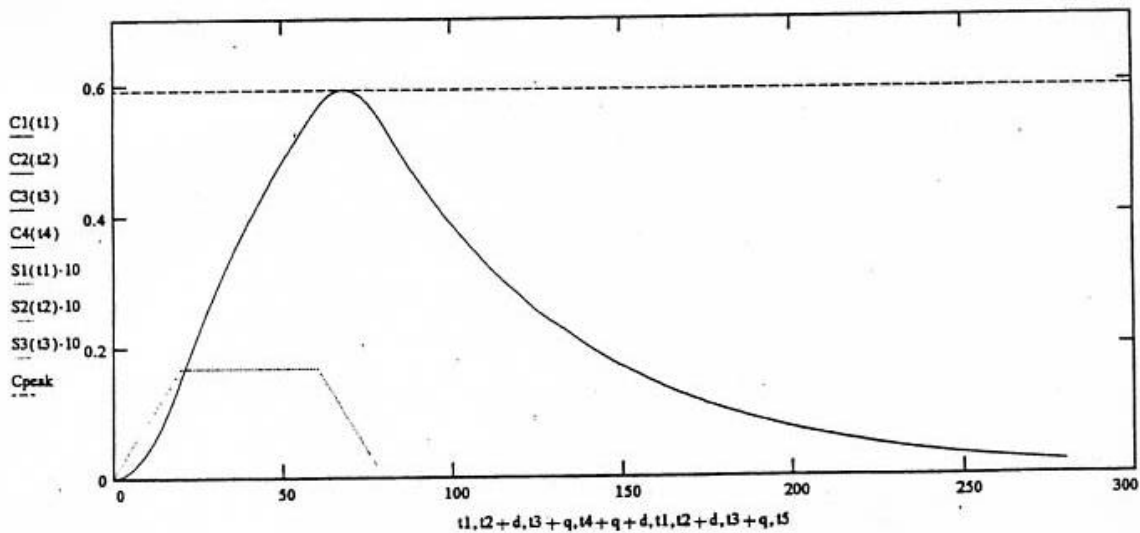
$$S3(t3) := S0 \left( 1 - \frac{t3}{d} \right)$$

$$C4(t4) := \frac{S0}{k^2 \cdot d} (1 - \exp(-k \cdot d) - \exp(-k \cdot q) + \exp(-k \cdot (d + q))) \cdot \exp(-k \cdot t4)$$

$$S4(t4) := 0$$

$$t3_{\text{max}} := \frac{\ln \left( \frac{\exp(k \cdot d) - 1 + \exp(k \cdot q)}{\exp(k \cdot q)} \right)}{k}$$

$$C_{\text{peak}} := \frac{S0}{k^2 \cdot d} (1 + k \cdot d - k \cdot t3_{\text{max}} + \exp(-k \cdot (t3_{\text{max}} + q)) - \exp(-k \cdot t3_{\text{max}}) - \exp(k \cdot (-t3_{\text{max}} - q + d)))$$



$$E1 := \int_0^d C1(t1) dt1$$

$$E2 := \int_0^{q-d} C2(t2) dt2$$

$$E3 := \int_0^d C3(t3) dt3$$

$$E4 := \int_0^{1000} C4(t4) dt4$$

$$Et := E1 + E2 + E3 + E4$$

$$Et = 60$$

$$= \frac{\text{mass}}{k \cdot V} = 60$$

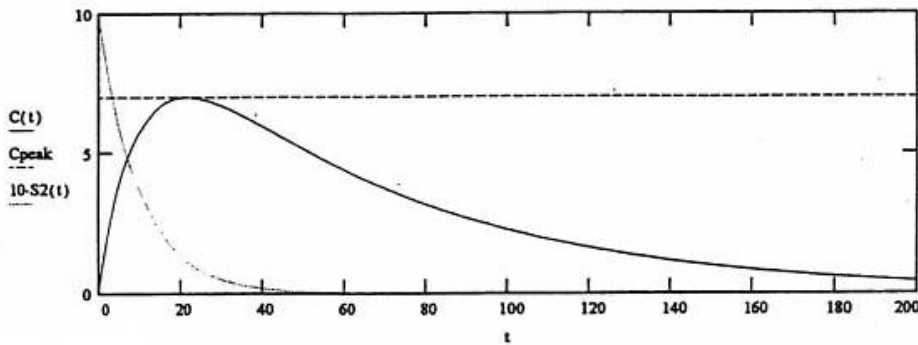
**INSTANTANEOUS APPLICATION, EXPONENTIAL EMISSION RATE**

$$S := 1 \quad k := \frac{1}{60} \quad r := .1 \quad t := 0, .1, 200 \quad S2(t) := S \cdot \exp(-r \cdot t) \quad \text{mass} := \int_0^{500} S2(t) \, dt$$

**PARAMETERS NOT EQUAL**

$$C(t) := \frac{S}{k-r} \cdot (\exp(-r \cdot t) - \exp(-k \cdot t)) \quad t_{\max} := \frac{\ln\left(\frac{r}{k}\right)}{r-k} \quad C_{\text{peak}} := \frac{S}{r} \cdot \left(\frac{r}{k}\right)^{\frac{k}{k-r}}$$

$$E := \int_0^{500} C(t) \, dt \quad E = 599.827 \quad \frac{\text{mass}}{k \cdot V} = 600$$



**PARAMETERS EQUAL**

$$r := k \quad S2(t) := S \cdot \exp(-r \cdot t) \quad C(t) = S \cdot t \cdot \exp(-k \cdot t) \quad t_{\max} = \frac{1}{k} \quad C_{\text{peak}} = \frac{S}{k} \cdot \exp(-1) \quad \text{mass} := \int_0^{500} S2(t) \, dt$$

$$E := \int_0^{1000} C(t) \, dt \quad E = 3.6 \cdot 10^3 \quad \frac{\text{mass}}{k \cdot V} = 3.599 \cdot 10^3$$

