

United States ENVIRONMENTAL PROTECTION AGENCY Washington, DC 20460	<u>AGENCY USE ONLY</u> OMB Control No.: 2060-0226 Expires: 8/31/2014
SNAP INFORMATION NOTICE For Significant New Alternatives	Date of Receipt: Date 90 Day Review Begins:
When completed send this form to: <u>Via US Postal Service:</u> SNAP DOCUMENT CONTROL OFFICER OFFICE OF AIR AND RADIATION, 6205 J U.S. EPA 1200 PENNSYLVANIA AVE NW WASHINGTON, DC 20460	Date Review Completed: CBI Status:
Enter the total number of pages in your SNAP information Notice:	Document Control Number
INTRODUCTION	
<p>GENERAL INSTRUCTIONS</p> <p>This form may be used to submit information under the Significant New Alternatives Policy (SNAP) program for the review of alternatives to class I and class II ozone-depleting substances (ODS) under section 612 of the Clean Air Act. Submitters are required to provide this information on new substitutes to assist the Agency in assessing the acceptability of chemicals or processes that are considered alternatives for ODSs. A separate notice must be filed for each alternative you are submitting.</p> <p>PAPER SUBMISSIONS: All paper submissions must be provided in three complete copies. If information is to be claimed as confidential, all confidential information must be excised from one of the copies, which will be placed in the public docket; the other two copies must include the confidential material. If no claims of confidentiality are made for the submission, all copies must be identical.</p> <p>CD-ROM SUBMISSIONS: The SNAP program also accepts submissions via CD-ROM. If information is to be claimed as confidential, all confidential information must be excised from one of the files on the CD-ROM, which will be placed in the public docket; the other file must include the confidential material. The file with the confidential material must include "contains CBI" in the file name.</p> <p>STEP-BY-STEP INSTRUCTIONS: The Instructions for the SNAP Information Notice and TSCA/SNAP Addendum ("Instructions") are designed to assist applicants in completing this form. The Instructions provide step-by-step guidance on submitting a SNAP notice, asserting confidentiality claims, completing the notice form, sector-specific data requirements, and submitting test data and supplemental information.</p> <p>To facilitate Agency review of alternatives, this form must be filled out as completely as possible. Please provide all information requested to the extent that it is known or reasonably ascertainable. Make reasonable estimates if actual data is unavailable.</p> <p>TYPE OF NOTICE (Check only one box)</p> <p style="text-align: center;">Select the appropriate box identifying the type of notice submitted:</p> <p>Manufacturer Submission: New alternative, Substance, or Formulation _____ <input type="checkbox"/></p> <p>Petition: New alternative, Substance, or Formulation _____ <input type="checkbox"/></p> <p>Petition: Revision of the Existing SNAP list _____ <input type="checkbox"/></p> <p>Petition: Request to Grandfather Use of An Unacceptable Substitute _____ <input type="checkbox"/></p>	

Part I - GENERAL INFORMATION

You must provide the identity of the alternative chemical or processes and the identity and percentages of all components in a blend and/or process, even if you claim the identity as confidential. You may authorize another person to submit the identity for you, but your submission will not be complete and review cannot begin until EPA receives this information.

Part II - ALTERNATIVE-SPECIFIC INFORMATION

Please indicate the sector(s) for which you are submitting information on the substitute by checking the appropriate boxes:

- Refrigeration and Air Conditioning
- Foam Blowing
- Solvent Cleaning
- Fire Extinguishing and Explosion Prevention
- Sterilization
- Aerosols
- Adhesives, Coatings, and Inks
- Tobacco Expansion
- Pesticides

You may need additional copies of Part II if there are several manufacturing, processing, or use operations that you will describe in this notice. Please reproduce these sections as needed.

If your substitute is also subject to review under FIFRA, provide the FIFRA Registration Number:

Part III - RELEASE AND EXPOSURE DATA

Please reproduce additional copies of Part III as necessary.

Part IV - LIST OF ATTACHMENTS

Please attach additional sheets if you do not have enough space on the form to fully answer a question. Label each continuation sheet with the corresponding section heading and the question. In part IV, list these attachments and any test data, other data, or any optional information that you include in this notice.

TEST DATA AND OTHER DATA

You are required to submit all test data in your possession or control and to provide a description of all other data known to you if these data are related to the health and environmental effects of the manufacture, processing, distribution in commerce, use, or disposal of the alternative. Standard literature citations may be submitted if they do not appear in the open scientific literature. Complete test data (in English), not summaries of data, must be submitted if they do not appear in the open literature. The following are test data and other data that might be submitted (see the Instructions for a more complete list of data to be submitted.) Please indicate test data to be included in your submission notice by checking the appropriate boxes:

- Health Effects Data Yes No
- Flammability Data Yes No
- Environmental Effects Data Yes No
- Environmental Fate Data Yes No
- Risk Assessments Yes No
- Test Data Not in the Possession/Control of the Submitter Yes No
- Other Data Yes No

CONFIDENTIALITY CLAIMS

Anyone submitting information must assert a claim of confidentiality at the time of submission for any data which are to be treated as Confidential Business Information (CBI). Substantiation of this claim must also be provided at this time. All information claimed as CBI will be treated in a manner consistent with 40 CFR Part 2, Subpart B. Failure to assert a claim of confidentiality at the time of submission may result in disclosure of information by the Agency without further notice.

To assert a claim on this form, circle or bracket the information you claim as confidential and mark the confidential box at the bottom of the page. Then provide substantiation of this claim on an attachment to the notice. If any information is claimed as confidential, you must provide a "sanitized" version of this notice, including attachments, to EPA with your submission. For additional information on claiming information as confidential, please see the Instructions Manual.

Information submitted as CBI may be accessed by companies designated as Authorized Representatives of the United States Environmental Protection Agency (EPA) under an EPA contract for the purpose of assisting EPA in the development and implementation of national regulations for the protection of stratospheric ozone, including the development of the SNAP program. These Authorized Representatives may have access to any information received by the Stratospheric Protection Division within the EPA Office of the Atmospheric Programs for use in reviewing the need for possible control of any substance, practice, process or activity that may reasonably be anticipated to affect stratospheric ozone. Access to such information is necessary to ensure that these companies can complete the work required by the contract.

Authorized Representatives of the Administrator are subject to the provisions of 42 U.S.C. 7414(c) respecting confidential business information as implemented by 40 CFR 2.301(h).

Part I - GENERAL INFORMATION

Section A - SUBMITTER IDENTIFICATION

1. (a) Person Submitting Notice (in U.S.)

Name of Authorized Official Title

Company/Organization

Mailing Address Telephone & Fax Numbers

E-mail Address

(b) Agent (if applicable)

Name of Authorized Official Title

Company/Organization

Mailing Address Telephone & Fax Numbers

E-mail Address

(c) Joint Submitter (if applicable)

Name of Authorized Official Title

Company/Organization

Mailing Address Telephone & Fax Numbers

E-mail Address

2. Technical Contact (in U.S.)

Name of Authorized Official Title

Company/Organization

Mailing Address Telephone & Fax Numbers

E-mail Address

3. If you have had a prior communication with EPA concerning this notice, note the date and type of communication (letter, phone, etc.) and the EPA staff person's name:

Mark (X) if None _____

Mark (X) this box if this page contains CBI _____

Part I - GENERAL INFORMATION (continued)

Section B - ALTERNATIVE IDENTIFICATION

1. Commercial/Trade name (s) of alternative:

2. (a) Name of chemical(s) (preferably IUPAC nomenclature) and/or process name. For blends, provide the percent composition of each constituent. For powdered aerosols used in fire suppression, see page 11 of the Instructions for additional necessary composition information.
(b) Chemical Abstracts Service (CAS) registry number and molecular formula.
(c) For alternative processes and technologies describe the technology and and provide a diagram of the system. Also provide the information on any chemical constituents.
(d) If you have applied for or hold a patent on the substitute, provide the patent name, number (if available), and information on the topics covered in the patent.

3. Generic name:

If the name of the substitute is declared Confidential Business Information, provide a generic name.

4. Specific End-Use

(a) Describe each end-use that may be reasonably anticipated for the alternative. Be sure to provide a broad description (e.g., terpene-based semi-aqueous solvent cleaner for electronic parts, or HFC substitute refrigerant for centrifugal chillers). For a list of end uses, see Appendix A to the Instructions, beginning on p. 23. If the alternative is a refrigerant, indicate whether it is a candidate for use in retrofits of existing equipment, for use in new equipment only, or both.
(b) Identify the ODS and the quantity of substitute needed to replace it for each end use in pounds (i.e., the replacement ratio).

Mark (X) this box if this page contains CBI _____

Part I - GENERAL INFORMATION (continued)

Section B - ALTERNATIVE IDENTIFICATION (Continued)

5. Impurities

(a) Identify each impurity that may reasonably be anticipated to be present in the chemical alternative as manufactured for commercial purposes. If there are unidentified impurities, enter "unidentified."

(b) Provide the CAS Registry Number for each impurity if available.

(c) Estimate the maximum weight percentage of each impurity. If there are unidentified impurities, estimate their total weight percentages.

6. Byproducts:

(a) Describe any byproducts or degradation products resulting from the manufacturer, processing, use or disposal of the chemical alternative or chemicals used in the new alternative. If there are unidentified byproducts/ degradation products enter "unidentified."

(b) Provide the CAS Registry Number for each byproduct or degradation product if available.

(c) Indicate where the byproduct/degradation product is formed (e.g. during manufacturing, during use, in case of fire, etc.) and the amount or rate at which it is formed.

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Part II - ALTERNATIVE-SPECIFIC INFORMATION

Section A - PHYSICAL AND CHEMICAL PROPERTIES – See Appendix B to the Instructions to see which properties apply to which uses.

1. Molecular weight	2. Physical state at 20 °C	
3. Melting point at 1 atm. pressure ° C	4. Boiling point at 1 atm. pressure °C	
5. Specific gravity g/ml	6. Odor threshold mg/m ³	
7. Solubility using solvent @ temperature °C	g/L	
8. Solubility in water @ temperature °C		
9. Partition coefficient	Log K _{ow}	Log K
10. Vapor pressure @ 20° C psi (Also provide vapor pressure-temperature curve for refrigerants.)	11. Critical temperature °C	12. Critical Pressure psi
13. Are spectra attached?	14. Disassociation constant	
15. Particle size distribution	16. Volatilization from soil	
17. Volatilization from water	18. Viscosity @ 20 °C	
19. pH@concentration	20. Thermal conductivity (for foam blowing agents)	
21. Adsorption coefficient	22. Flammability limits (LFL, UFL) % vol	
23. Flash point	24. Heat of combustion	
25. Maximum pressure rise	26. Maximum rate of pressure rise	
27. Other (specify)		
<p>28. Flammability: Provide any information on flammability concerns. For example, if any abatement techniques are being used to minimize the risks associated with flammable substances or mixtures, detail those techniques below. If a substitute is flammable, an assessment of overall risk in each end-use may be required. For flammable refrigerants, provide a fault tree analysis for each end use. For flammable foam blowing agents used in spray foam, provide a training program that addresses flammability concerns specific to this substitute. (See Appendix B to Instructions for sector-specific data requirements for flammable substances).</p>		

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Part II - ALTERNATIVE-SPECIFIC INFORMATION (Continued)

Section B - ATMOSPHERIC INFORMATION

1. Ozone-depletion potential (ODP):

(a) Provide the 100 year ODP of the alternative relative to CFC-11, if known. If the substitute is a blend, provide the ODPs of the individual constituents. Reference the source for each ODP.

(b) Provide any additional data on the ODP of the alternative (e.g. atmospheric lifetime, chlorine or bromine loading potentials). Reference the source of this information and attach any supporting documentation.

2. Global Warming Characteristics:

(a) Provide the alternative's atmospheric lifetime and global warming potential (GWP) relative to carbon dioxide over 100-year time horizon, and 20-year or 500-year time horizon, if known. Reference the most recent assessment report of the Intergovernmental Panel on Climate Change (IPCC AR4). Alternate sources may include the 2010 World Meteorological Organization (WMO) Scientific Assessment of Ozone Depletion or the peer-reviewed literature. If the substitute is a blend, provide the GWPs of the individual constituents and an estimate of the blend at its nominal composition.

(b) If known, provide the alternative's expected impact on energy efficiency relative to the substance it is replacing (e.g. +/- X%) and results of any testing or modeling done (both theoretical and actual testing). Energy efficiency information is particularly useful for refrigerants and foams.

(c) For GWP values that do not come from AR4 or WMO 2010, provide any available additional data on the atmospheric lifetime and GWP of the alternative, including infrared absorption spectrum and infrared absorption capacity. Reference the source of this information.

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Part II - ALTERNATIVE-SPECIFIC INFORMATION (continued)

Section C - OTHER STATUTES AND STANDARDS

1. Describe whether and how the manufacture, use, and disposal of the alternative is regulated under other environmental regulatory statutes such as those listed below. List any concentration-based or other numerical standards to which the alternative is subject under the standards and regulations.

Titles of the Clean Air Act (CAA) other than Title VI _____

the Clean Water Act (CWA) _____

the Safe Drinking Water Act (SDWA) _____

the Resource Conservation and Recovery Act (RCRA) _____

the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) _____

the Toxic Substances Control Act (TSCA) _____

the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) _____

the Emergency Planning and Community Right to Know Act (EPCRA or SARA Title III) _____

State and local laws _____

Other applicable environmental federal, state, and local laws not mentioned above _____

2. Describe whether and how occupational, consumer, or general population exposure to the alternative is regulated under health and safety related statutory authorities, such as those implemented by the Food and Drug Administration (FDA), the Occupational Safety and Health Administration (OSHA), the Department of Transportation (DOT), and state and local laws. List any concentration-based or other numerical standards to which the alternative is subject under the above statutes and regulations. Also list any other standard-setting organizations such as the National Fire Prevention Association (NFPA) the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE), or Underwriters Laboratories (UL) that will evaluate the substitute from a health and safety perspective.

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Part II - ALTERNATIVE-SPECIFIC INFORMATION (continued)

Section D - COST AND AVAILABILITY OF THE ALTERNATIVE

1. Estimate the cost per pound for the substitute chemical. For alternative processes and technologies, describe installation costs associated with the alternative. Please describe the information used as the basis for this cost estimate.

2. Provide information on production of the substitute. Include estimates on:

- (a) Year substitute will be available if not currently produced.
- (b) Total pounds production per year (current figure).
- (c) Years to maximum market penetration.
- (d) Maximum total production per year at market saturation.
- (e) Estimated percentage of market at market saturation.

3. Describe any new equipment and use profiles that will be necessary in order to use the substitute. If retrofitting of existing equipment is required, detail changes in technologies needed to use the alternative and address any materials compatibility issues. Provide information on each end-use and capital costs associated with the substitute or alternative process. Include cost of equipment and/or any new materials, equipment lifetime, changes in labor and energy costs.

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Part III - RELEASE AND EXPOSURE DATA

Section A - TOXICITY AND HAZARD INFORMATION

For chemical alternatives and for chemicals used with alternative processes, summarize below (and attach supporting information on) the acute and chronic toxicity of the substitute and of its constituent chemicals on any organism (e.g. human and/or other mammals, fish, wildlife, and plants), if available. Include any data on impurities and degradation products if known. Also include information on any permissible exposure limits (PELs), occupational exposure limits (OELs), or Acceptable Exposure Limits (AELs) that have been set for the substitute for use in the workplace. In addition, please attach a copy of any hazard warning statement, label, material safety data sheet, or other information which will be provided to any person who is reasonably likely to be exposed. (See Pgs. 16-17 of the Instructions for sector-specific requirements for toxicity testing).

Section B - ENVIRONMENTAL RELEASE AND DISPOSAL AT MANUFACTURE

For each manufacturing site (for manufacturing of substitutes and/or products containing substitutes):

- (a) Identify all site locations (i.e., name and address) for each chemical manufacturing process.
- (b) Identify all site locations for manufacturing of products using substitutes (e.g., refrigerators containing the substitutes).
- (c) Identify the points of release and/or exposure during the manufacture of: (i) the substitute and/or (ii) products containing the substitutes.
- (d) Provide information on the magnitude of release if available, along with the media to which the substitute is released (e.g., indoor air, outdoor air, water, land).

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Part III - RELEASE AND EXPOSURE DATA

Section C- OCCUPATIONAL EXPOSURE AT MANUFACTURE

For each manufacturing site (manufacturing of substitutes and/or products containing substitutes):

- (a) Describe the activities in which workers may be exposed to chemicals at the manufacturing facility. Answer items (b) through (g) for each activity.
- (b) Describe any protective equipment and engineering controls used to protect workers (e.g., goggles, gloves, chemical hoods).
- (c) Indicate the physical form of chemicals at the time of handling/exposure (e.g., solid, liquid, gas).
- (d) Estimate average and maximum numbers of workers involved in each activity.
- (e) Estimate average and maximum duration of activity for any worker, in terms of (1) hours/day and (2) days/year.
- (f) Enter the contact pathway (e.g., ingestion, inhalation, dermal).
- (g) Estimate the average and high-end exposure concentrations (separated by a /), being sure to provide units of measure.

Section D - ENVIRONMENTAL RELEASE AND DISPOSAL IN END-USE

For each end-use of a substitute (end-uses using the substitute in products and/or processes):

- (a) Provide the estimated amount (in kg/day) of each chemical released to the environment (e.g., as a solid waste or wastewater effluent) at the point of, or subsequent to, the end-use at a site using the substitute (e.g., in products containing the substitute and processes using the substitute).
- (b) Identify the media (indoor air, outdoor air, land, water) to which the chemical will be released from that release point.
- (c) Describe the control technology used to limit release; estimate the amount released to the environment with the control technology in place to limit release. If the substitute is to be disposed of, indicate the method and location of disposal.
- (d) Are releases covered under RCRA? If so, identify the RCRA hazardous waste codes.
- (e) Identify the approximate number of sites expected to use the substitute.
- (f) Provide information on recycling of the substitute. Describe any associated costs and equipment.

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Part III - RELEASE AND EXPOSURE DATA (continued)

Section E - OCCUPATIONAL EXPOSURE AT END-USE

For all end-use scenarios of the substitute (end-uses utilizing the substitute in products and/or processes):

- (a) Describe the activities in which workers may be exposed to chemicals at the end-use (i.e., during installation, maintenance, inspection, servicing, or use). Answer items (b) through (g) for each activity.
- (b) Describe any protective equipment or engineering controls used to protect workers (e.g., goggles, gloves, chemical hoods).
- (c) Indicate the physical form of chemicals at the time of handling/exposure (e.g., solid, liquid, gas).
- (d) Estimate average and maximum numbers of workers involved in each activity.
- (e) Estimate average and maximum duration of activity for any worker, in terms of (1) hours/day and (2) days/year.
- (f) Enter the contact pathway (e.g., ingestion, inhalation, dermal).
- (g) Estimate the average and high-end exposure concentrations (separated by a /), being sure to provide units. Personal monitoring data may be required for some end uses (see pgs. 17-18 of Instructions).

Section F - CONSUMER EXPOSURE

For each end-use of a substitute (end-uses where a consumer might be exposed):

- (a) Identify the potentially exposed consumer population (e.g., indoor residents).
- (b) Identify the exposure medium (e.g., air).
- (c) Enter the contact pathway (e.g., ingestion, inhalation, dermal).
- (d) Describe the exposure point of concentration. Provide (1) average and (2) high-end concentration estimates, including units of measure.

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Part III - RELEASE AND EXPOSURE DATA (continued)

Section G - GENERAL POPULATION EXPOSURE (optional)

For manufacturing of substitutes and products containing substitutes:

- (a) Identify and number potential general population exposure points.
- (b) For each exposure point described in (a), identify the potentially exposed population (e.g., residents at the fenceline to the manufacturing facility).
- (c) Identify the contact pathway (e.g., ingestion, inhalation, dermal).
- (d) Identify the exposure medium (e.g., air, water).
- (e) Enter the exposure point concentration (mg/m³ or ppb). Provide (1) average and (2) high-end estimates.

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Part V - CERTIFICATION

I certify to the best of my knowledge and belief that:

1. All information provided in this notice is complete and truthful as of the date of the submission.
2. I am submitting with this notice all test data in my possession or control and a description of all other data known to or reasonably ascertainable by me.
3. If this is a submission of a new alternative, the company named in Part I, Question 1a of this notice:
 - (a) intends to manufacture, formulate, import, market, or use a new alternative to a Class I or Class II ozone-depleting substance which is identified in Part I, Section B, Question 2.
 - (b) seeks an acceptability determination on a new alternative(s) to a Class I or Class II ozone-depleting substance, which is identified in Part I, Section B, Question 2.
4. The accuracy of the statements made in this notice reflects my best prediction of the anticipated facts regarding the alternative described herein. Any knowing and willful misinterpretation is subject to criminal penalty pursuant to section 113(c) of the Clean Air Act and 18 U.S.C. §1001.

Signature and Title of Authorized Official (Original Signature Required): **Date**

Signature of Agent (Where Applicable): **Date**

For persons filing a SNAP Information Notice, the reporting burden is estimated to average 171 hours per year. For persons filing a TSCA/SNAP Addendum, the reporting burden is estimated to average 36 hours per year. Burden means that total time, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instruction; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division (2822T), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave NW, Washington, DC 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.