

PROCESS DESCRIPTION

In automobile refinishing, almost all spray coating operations are expected to involve a worker spraying the vehicle, typically in a ventilated spray booth with dry filters to collect over spray. The car can dry at atmospheric conditions, or at elevated temperatures through the use of heated paint booth air or portable heat sources (USEPA, 1994a). The curing temperature is likely to be comparable to that used in OEM "touch-up" activities (i.e., up to 180°F). In contrast, the automobile original equipment manufacturing (OEM) involves applying several layers of paint alternated with heating to cure the paint often at temperatures as high as 450°F, although lower temperatures are used to simply remove water (Pfanstiehl, 1992). Painting is conducted by robots and over spray is collected in waterwash booths of downdraft or crossdraft design. Water is used almost exclusively to collect over spray in new automobile manufacturing plants (USEPA, 1994b). Individual sites may add additional painting steps to achieve protection in certain areas, may modify the drying/curing steps, and may conduct "touch-up" repairs. In these cases, the paint is applied manually and cured at temperatures up to 180°F.