

US EPA ARCHIVE DOCUMENT



BEST PRACTICES FOR THE PAINT MIXING ROOM

CUT SHOP WASTE AND POLLUTION

SAVE MONEY

REDUCE HEALTH AND SAFETY HAZARDS

KEEP ALL CONTAINERS COVERED

An open container of paint or solvent contaminates the air and wastes money. By putting a lid on it!—you will keep harmful vapors out of the air that you and your co-workers breathe. You'll also save materials and money by not letting your expensive paints and coatings evaporate away or be ruined by exposure to air.

INSTALL A VENTILATION SYSTEM OR PREFABRICATED MIXING ROOM

Inadequate ventilation, common in many paint mixing rooms, poses a serious health and safety risk. A well-designed ventilation system will pull harmful vapors away from you and significantly improve air quality in the mixing room. To get the most protection from your ventilation, make sure you position vapor-generating materials and equipment in front of or near an exhaust outlet (e.g., install an exhaust hood behind the mixing table). A prefabricated mixing room has built-in ventilation. Prefab units come in a range of sizes and designs for convenient placement in the shop. Be sure to set up equipment such that the ventilation draws vapors away from work stations.



Picture provided courtesy of CCAR-GreenLink®

Remember: all electrical equipment in the paint mixing room (e.g., switches, ventilation fans, lights, telephones) should be approved for Class I, Division 1 (explosive) environments.

WEAR AIR-PURIFYING RESPIRATORS

Vapor-generating materials and equipment pack most paint mixing rooms. A painter in a respirator is much less likely to breathe the harmful vapors in paints and solvents. When working in the mixing room, always use an air-purifying, respirator with organic vapor cartridges. This respirator should provide adequate protection for typical mixing room tasks.

Remember: for a tight-fitting air-purifying respirator to work properly, you must: (1) Make sure it forms a tight seal on your face (a clean shave where the mask touches your face is step one, followed by a “fit test” from a safety professional); and (2) Change the cartridges on a regular schedule, as specified by the manufacturer—once vapors saturate the cartridges, the respirator won’t protect you! Your employer should have an implemented filter change schedule as specified in 29 CFR 1910.134(d)(3)(iii).

WEAR CHEMICAL-RESISTANT GLOVES, CLOTHING -- AND EYE PROTECTION

Your skin and eyes also need protection from hazardous paint materials. Many chemicals in coatings and solvents are not only strong irritants, but can pass through your skin and damage your body’s internal organs. Be aware of the variety of chemicals you use in the mixing room and choose chemical-resistant gloves and paint suits that offer adequate protection.

For gloves, nitrile or butyl rubber make the grade, latex does not. **Remember:** even a more protective glove has a limited life span, especially if you use it when handling certain strong solvents—so, always follow the manufacturer’s recommended change schedule and never use a torn or punctured glove.



Warning: Isocyanates, the hardening component in most clear coats, are strong skin and lung irritants--and the leading cause of occupational asthma. Recent studies indicate that skin contact with isocyanates may trigger an allergic reaction in your lungs.



And don't overlook your eyes! A full face piece respirator will provide eye protection, however, goggles or a face shield should be worn with a half-mask respirator (as described above). The respirator or goggles/face shield will keep strongly irritating and

toxic chemicals from splashing in your eyes and face--and keep you from mistakenly rubbing your eyes with a contaminated hand. An eye wash station is a must for any auto refinishing shop.

PRACTICE WASTE REDUCTION

Shops that reduce waste do something good for the environment and their bottom line. In fact, more efficient use of paints and solvents lets you save twice: up-front, on the amount of materials you need per refinish job; and on the back end, in lower waste removal costs.

Mix only the amount of paints and coatings you need. High-volume, low-pressure (HVLP) spray guns, recommended for all painting tasks (and required by law in certain areas), transfer paint much more efficiently than conventional guns; the result: you use--and need to mix--far less paint.

Another good practice is to store and reuse left-over primers and basecoats. Computer mixing systems, offered free by many paint companies, make it easier to mix smaller quantities of paint and to track and reuse any left-overs.

USE AN AUTOMATED GUN CLEANER

An automated gun cleaner also saves you money--and improves health and safety in your shop. These devices help you get the most mileage from your cleaning solvent, reduce shop waste, and minimize your contact with hazardous solvents. Select a model with a lid that covers the entire basin. If you select a model that allows manual pre-cleaning in an open basin, make sure the basin is equipped with an exhaust fan to collect vapors before they escape into the room air. Remember: if equipped with an exhaust fan, the gun cleaner should only be used when the fan is connected to an exhaust outlet that removes the vapors from the room. Regardless of the type of gun cleaner you select, make sure you frequently inspect and maintain the unit - leaking hoses and lids with a poor fit can contaminate your mixing room with harmful solvent vapors.

Before placing a used spray gun in the gun cleaner, pre-clean the gun cup to remove gross coating contamination. This practice extends the service life and effectiveness of the cleaning solvent used in the automated cleaning unit.

For More Information on Best Paint Mixing Practices . . .



www.epa.gov/dfe/autobody/autobody.html

Talk to Mary Cushmac (202-564-8803, cushmac.mary@epa.gov) or David DiFiore (202-564-8796, difiore.david@epa.gov) of the DfE Project Team.

THE DESIGN FOR THE ENVIRONMENT AUTO REFINISHING SHOP PROJECT'S GOAL IS TO WORK WITH AUTO REFINISHERS TO IDENTIFY AND ADOPT SAFER, CLEANER, MORE EFFICIENT PRACTICES AND TECHNOLOGIES.
