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# Pollution Prevention for Auto Refinishing Shops

## What is Pollution Prevention?

Pollution prevention is the use of materials, processes, or practices that reduce or eliminate the creation of waste at the source. It includes raw materials substitution, improved operating practices, process and equipment modifications, and energy and water conservation. Many pollution prevention practices not only reduce air emissions, waste generation, and conserve water and energy, but also can save a business money.

Auto body and paint shops use a variety of hazardous materials and generate many different types of waste, including hazardous waste. Paints and solvents used in these facilities emit volatile organic compounds (VOCs), a regulated air pollutant. As such, practices that reduce the generation of waste (and air emissions) can benefit the shop by reducing its regulatory burden, minimizing health and environmental risks, and reducing costs for material purchases, waste management, and disposal.

## How can my shop prevent pollution?

**Surface Preparation:** Surface preparation activities generate dust, solvents, and other potentially hazardous wastes. To prevent pollution:

- Collect sanding dust at the source using vacuum sanding with HEPA filters.
- Minimize wet sanding by using a spray bottle to wet small areas and wet sand over drip pans.
- Do not sweep or wash sand outside or to a storm drain, this can clog the system and pollute nearby streams.
- Evaluate solvents, choosing less toxic products.

**Reduce Paint Waste:** Throwing away paint is throwing away money; over spray is also lost revenue. To reduce losses:

- Keep inventories at a minimum; use next day or weekly ordering.
- Install a mixing bank to keep paints from separating.
- Improve color matching by using a colorimeter and keeping a color library.
- Mix on a scale and mix only small amounts to use on test panels or cards.
- Use computerized mixing which allows easy tracking of product use and VOC air emissions.
- Remove parts before painting. This saves time in masking and touching up overspray, and allows better orientation of a part for maximum transfer efficiency. It is also easier to move separate parts from station to station than the whole vehicle.
- Plan primer and clear coating on multiple cars back to back. Schedule waterborne primer work for the end of the day; the primer is cured and ready for the base coat by the next morning

### Auto Body shop wastes:

- Solvent and paint
- Still bottoms from solvent recycling
- Sanding dust
- Surface cleaners, rust removers
- Wash water
- Wet sanding sludge
- Paint booth filters
- Filters from spray gun cleaning
- Automotive fluids—oil, coolant
- Batteries
- Refrigerant
- Used containers, wipes, rags
- Office waste—electronics, toner cartridges, fluorescent lamps, batteries, paper, cardboard, beverage bottles & cans

Waterborne paint systems have improved in appearance, durability, and longevity over the past 5 years and they continue to improve. Shops in California successfully use waterborne primers and benefit from decreased hazardous waste disposal costs, improved worker health and safety, and improved environmental compliance.

- Use low VOC products and work with paint suppliers to evaluate and identify less toxic paints and cleaners.
- Clean paint booth and filters regularly, this will help produce cleaner paint jobs, reduce waste, and protect workers' health.
- Train employees to improve transfer efficiency.

**Spray Gun Cleaning:** There are four pollution prevention strategies for spray gun cleaning:

- Extend the effective life of the cleaning solvent with two-stage cleaning.
- Clean with enclosed automatic paint gun washing equipment.
- Use disposable paint cup liners.
- Use alternative gun cleaning technology (waterbased or citrus based cleaners).

Using disposable spray cup liners can reduce solvent and paint waste. The same cup used to mix paint can be used in the gun and when finished, pulling out the cup leaves only minimal gun cleaning.

**Spray Gun Equipment:** When looking at new spray equipment, consider the following:

- What is the anticipated transfer efficiency? Has the spray gun undergone independent testing to verify product claims? EPA's Verification unit evaluated a number of spray guns:  
<http://www.epa.gov/etv/verifications/vcenter6-16.html>
- Does the gun operate effectively within the required pressure range?
- Have painters been trained in maximizing transfer efficiency?

**Housekeeping:** A clean, well maintained facility reduces the chance of accidents, spills, and cross contamination.

- Ensure chemical and waste containers are well labeled.
- Check to see that chemical and waste containers are in good condition, free from wear, and leaks.
- Use secondary containment around chemical and waste containers.
- Plug floor drains to prevent oils, solvents, and other wastes from entering the wastewater system.
- Properly recycle or dispose of wastes through recyclers, used oil-marketers, and/or hazardous waste management companies.

**For more information contact DEQ's Pollution Prevention Program at (208) 373-0502.**