



The National Park Service EnviroFact Sheet

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Managing Paints/Coatings and Coating Waste (SW-8)

DRAFT

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Coatings include paint, varnish, stain, sealant, or other treatment applied to surfaces such as wood, plastic, metal, and plastic for maintenance or aesthetic purposes. Coatings generally consist of solids in a carrier made of water and/or solvent. Solvent-based coatings primarily contain the same volatile organic compounds (VOCs) as the carrier. Some VOCs have potential human health and environmental effects. VOCs may also contribute to ground-level ozone.

Solvent-based coatings were once used in almost all industrial, commercial, and household applications. Now, however, with stricter air emissions rules and waste management regulations, as well as general environmental awareness and health and safety concerns, most coating manufacturers have reduced or removed solvents in their products.

Water-based coatings, such as latex paints, contain mostly water as the carrier, but may also contain chemicals such as glycol ethers, alcohols and other water soluble VOCs.

It is recommended that water-based coatings be used whenever feasible for a specific application.

APPLICABLE REGULATIONS

Waste from solvent-based coatings is often hazardous and, as such, is regulated by the Resource Conservation and Recovery Act (RCRA) under 40 CFR 260-265. Also, the use of large quantities of solvent-based coatings or their application in paint spray booths could trigger air quality regulations. If coatings are flammable, hazardous materials storage requirements (29 CFR 1910.106) under OSHA may also apply.

Most state rules for management of coating wastes will be consistent with the federal regulations, but they could be more stringent than the federal requirements. This will be particularly relevant in urban areas where ground-level ozone pollution (smog) is a problem.

HANDLING AND STORAGE

The following list includes examples of common solvent-based coating products:

- Wood varnish or stain
- Polyurethane
- Wood sealers or water repellent products
- Rust-preventing paint
- Aerosol spray paint
- Automotive paint
- Marine coatings
- Coatings for cold weather applications
- Pavement marking
- Paint thinner
- Mineral spirits
- Architectural coatings for historic structures
- Metal coatings

If a solvent-based coating must be used, use and store the coating according to the health and safety warnings provided on the MSDS. Keep the container closed as much as possible during use to minimize air emissions. Store flammable materials away from heat or combustion sources. Based on the quantity of flammable liquids stored, specific OSHA and NFPA guidelines or types of containers, tanks, storage, cabinets, rooms, and buildings may apply (see the EnviroFact Sheet - "Managing Hazardous Materials (SY-2)" for details).

Remember that water-based coatings and cleaners may still contain VOCs or other chemicals. Always confirm that they are safe for the particular use. Even though a water-based coating waste may not be hazardous, it may still require special treatment.

If coating waste is hazardous, ensure that the proper hazardous waste container management requirements are met (see the EnviroFact Sheet - "Hazardous Waste Management: Generator Requirements (HW-1)" for details).

DISPOSAL

Solvent-based coating waste (including thinners and cleaners) should be treated as hazardous waste. In addition, extreme care should be taken when removing old coatings, as they may contain lead compounds. Do not mix waste from solvent-based coatings with other wastes.

Used applicators, brushes, rags, and containers that contain only a dry residue from the coating are usually not considered hazardous waste and can be disposed of with other refuse. If the materials still contain free flowing solvent, they should be handled as liquid and/or hazardous waste.

Be sure that liquid waste coatings are not allowed to air-dry before disposal.

POLLUTION PREVENTION

- Minimize excess inventory that may exceed shelf life (and become waste) by purchasing only the amount that is expected to be used in the next 6-12 months, or by using color standardization to reduce the types needed.
- Obtain a Material Safety Data Sheet (MSDS) from the supplier before purchasing products. Choose less hazardous products whenever possible.
- When purchasing products in "household" quantities (less than 5 gallons) at a hardware or retail store, look for flammability warnings or "fast drying" claims. These are common indicators of a high solvent content.



FOR MORE INFO...

Paints and Coatings Resource Center, Regulatory Compliance and Pollution Prevention information for paints and coatings:
<http://www.paintcenter.org/peg/p2epadocs.cfm>

COATING AND WASTE COATING COMPLIANCE CHECKLIST

Checklist Item	Notes
1. Confirm that alternatives to solvent-based coatings (water-based or no coating at all) have been investigated and implemented whenever feasible (e.g., determine if “plastic wood” can be selected instead of wood products that need to be weather-proofed).	
2. Ensure that oil-based paints are not allowed to air-dry/evaporate and then disposed of with municipal waste.	
3. Ensure that all coating waste streams have been properly characterized as hazardous or non-hazardous waste. If MSDSs are used to characterize waste, ensure that copies are kept with other waste records.	
4. Confirm that solvent-based coating wastes are being managed as hazardous, if necessary. Ensure that these wastes are not mixed with other wastes.	
5. Verify that technical data sheets or MSDSs for the coatings used at the park have been obtained and their contents have been determined.	
6. Ensure that excess inventory and waste of all coatings, including water-based products that contain VOCs, are minimized.	
7. If coatings are flammable, ensure that they are being handled and stored safely and in accordance with 29 CFR 1910.106 if applicable (see EnviroFact Sheet – “Managing Hazardous Materials (SY-2)”).	