
ENVIRONMENTAL Fact Sheet



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Management of Post Consumer Paint for Recycling

INTRODUCTION

Because post-consumer paint makes up the largest portion of household hazardous waste (HHW), local HHW collection programs are beginning to recycle paint rather than include it with hazardous wastes destined for disposal. In 2004, the Department of Environmental Services established several paint recycling programs as part of local HHW collection programs. Under these paint recycling programs, homeowner-generated paint is collected by town staff, stored on site and later collected and recycled by a commercial paint recycling company. By recycling paint, these programs realize considerable savings as compared to hazardous waste disposal costs while offering a needed service to taxpayers. This guide offers information and advice for local programs that are accepting and managing paint for recycling as a service for their residents.



GENERAL INFORMATION

Latex and Solvent-Based Paints

Water-based paints also referred to as **Latex** or water-thinned paints, are made up of water, pigments and an emulsion resin (the latex). Latex paints do not have hazardous characteristics, are generally not toxic, and are not considered a hazardous waste. **Solvent-based paints**, also called oil-based and alkyd paints contain oils and solvents, that are toxic and flammable. If improperly released to the environment, solvent-based paints have the potential to contaminate drinking water supplies and groundwater, and can be toxic to plants and animals. Unusable or non-recyclable solvent-based paints are considered a hazardous waste.

Safety and Health

Vapors released from solvent-based paints are toxic to humans if inhaled over a long period of time in high enough concentrations. These vapors have the potential to start a fire if exposed to a spark or flame and solvent-based paint will support a fire, once ignited. Most paint collection programs occur outdoors where there is sufficient air movement to eliminate the threat from solvent-based paint vapors. However, when solvent-based paints are collected and managed indoors, doors and windows should be open to allow adequate air circulation and all ignition sources should be eliminated. Contact the local fire department for any further requirements.

Protective Clothing

Clothing such as gloves, boots and protective eyewear will help protect collection workers from

most solvent-based paint components. Workers who are continuously exposed to paint should also use NIOSH-approved respirators.

Unsuitable Products

Careful examination and sorting is important to ensure only usable or recyclable paint is accepted. Workers should be able to understand label information that identifies unusable products and be able to identify grossly contaminated paint, as well as unacceptable products such as solvent-based stains and specialty coatings.

Reuse versus Recycling

If the program supports a "swap shop," consideration should be given to first offering paint for direct reuse. Unopened, usable, water and solvent-based paint may be offered for direct reuse as a "product" to homeowners. Opened, water-based paint may also be offered for direct reuse if it is in good condition. Paint that cannot be reused "as-is" should be further examined and managed for recycling, that is, off-site reprocessing into "new" paint.

PAINT HANDLING PROTOCOL

What paint is acceptable?

Only accept paint in good-condition original containers that have legible labels. If you chose to accept paint cans that do not meet these criteria, you must manage it as a hazardous waste. If the lid or container bottom is bulging, this indicates the contents are under pressure and is also a reason not to accept the paint for reuse or recycling.

Depending on its composition and condition, different paints will have different management options available. The attached flow chart demonstrates options to consider following its acceptance and additional information for making each option decision follows.

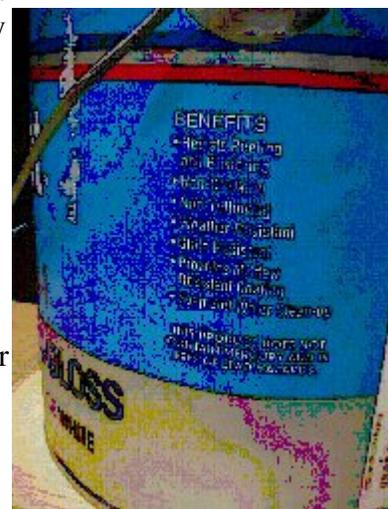
Initial Visual Inspection

If the can has been previously opened by the owner, a visual inspection of the contents will help determine if the paint is either reusable/recyclable or if it should either be rejected or disposed as hazardous waste. When inspecting the paint, look for any powders on the surface of the paint. Look for any liquids which are either a different color or nature than the paint or that won't mix with the paint. Look for "graininess," "cottage-cheese" consistency or any solid objects that indicate contamination. Also look for mold and mildew, an odd odor or obvious differences in color or texture from "normal" paint which indicate problems. Contaminated paint should be disposed of as a hazardous waste either by the owner, during a household hazardous waste collection event, or by the program running the paint recycling event.

How to Tell if it's Latex or Solvent-Based Paint



The easiest way to determine if paint is water-based or solvent-based is by the label. Solvent-based paints often mention "oil-based" or "alkyd" on the label, list solvents in their ingredients, are flammable and call for the use of thinner, turpentine or some other solvent for cleaning brushes and rollers. Water-based paint is often described as "latex" paint and calls for soap and water for clean-up. Another way to determine



the paint's classification is to put a drop of the paint into a small jar of water. Water-based paint will "dissolve" into the water while oil-based paint will stay separate and float to the surface.

What Not to Accept

Do not accept paint that is visually contaminated, or any paint that contains PCBs or heavy metals (lead, mercury, cadmium, chromium). Paints that contain mercury are often billed as "anti-fungal" or "mildew-resistant" and the label might list phenylmercury, acetate or succinate as an ingredient. Lead might be listed on the label as litharge, red or white lead or as leaded zinc oxide. In general, paint produced before 1978 contained heavy metals or PCBs, so sorters should look for dates or learn to identify label styles that indicate older paint.

Along with contaminated or heavy metal-containing paint, there are a number of paint-related products that are not acceptable. These include:

- Solvent-based stains*
- Varnishes and lacquers*
- Urethanes,* epoxies and adhesives
- Industrial or automotive paints
- Paint thinners
- Wood preservatives and anti-fouling paint
- Specialty coatings like swimming pool paint

* A paint recycling contractor might accept these materials but unless you are familiar with the many forms these coatings take, you might want to manage only paint, initially.

Once You Accept Paint

Your first step in managing paint, once accepted, is to make a list or spreadsheet indicating who (name and address) brought in paint, what products they brought in and how much they brought in. You might even want to assign an identification number matching the original owner with the paint cans accepted. This will provide valuable information later and could prevent problems if the recycler finds contamination in the paint.

Once the paint has been separated into solvent-based and water-based paints, the first consideration should be for direct reuse. Many programs have a "swap table" for collection events or even a full-time "swap shop" where unopened cans of paint (and other household items) in good condition may be displayed for homeowners to take for their personal use (reuse). While only unopened cans of solvent-based paint should be offered for reuse, opened cans of water-based paint - because of its non-toxic nature - may be offered for reuse as long as there is enough remaining paint in good condition to warrant display at the swap shop or swap table.



If the paint is not directly reusable as a swap shop "product," the next consideration is recycling. Presently, only uncontaminated solvent-based paint may be recycled. Recyclable solvent-based paint in good containers should be consolidated and stored for eventual recycling. Water-based paint not acceptable for reuse is not presently recyclable and should not be stored with solvent-based paint destined for recycling. Unusable or unwanted water-based paint should simply be dried out and disposed as a solid waste by either the homeowner or Program.

If You Have a Spill

Common sense precautions will help prevent spills. Paint inspecting and sorting should be done under good lighting conditions in a location with adequate ventilation. The floor should be a non-skid surface and paint cans should be opened on a sturdy non-slip surfaced table using proper tools. If a paint can is too rusted, deteriorated or badly damaged to be easily opened, it should be rejected or simply disposed of as a hazardous waste.

Most small spills may be cleaned up by Program staff if the right materials are handy. These include:

- Scoop-like shovels
- Absorbent/speedy-dry to absorb spills
- Absorbent pads and rags to clean surfaces
- Rubber gloves
- Fire extinguisher
- Plastic pails with tight fitting lids to accept spill clean-up materials.

Program staff should know the location of spill clean-up materials and be trained how to use them properly. A simple, written spill response plan should be created and posted. Program staff should read and understand spill response plan instructions.

For larger spills, or spills that might affect the immediate environment, State or local emergency response personnel should be notified. The posted spill response plan should clearly list contact numbers and should be posted in clear sight of the paint processing and paint storage area. An emergency telephone should be located within 100 feet of the area, as well.

STORAGE AND TRANSPORTATION

Gaylords/Bulking/Lab Packing



The easiest, least expensive way to store paint for recycling is a heavy duty plastic-lined

Gaylord. A Gaylord is a thick-walled plastic or cardboard container, approximately 4 feet wide by 3 feet deep by 3 feet high often attached to a wooden pallet. Individual paint containers may be both stored and shipped in a Gaylord. Stack only containers that are in good condition and with sealed lids in a Gaylord shipping



container. Paint cans that are in poor condition or leaking should not be accepted in this program. Poor condition or leaking cans should be placed in a compatible, sealable container and saved for disposal. These cans may also be "lab packed", that is, placed in a 55-gallon drum and covered with absorbent for shipment as a hazardous waste. Check with your paint recycler for guidelines on accepting or managing poor condition cans of paint. Some paint recycling companies will accept "bulked" paint. Bulked paint is simply paint emptied out of their cans into a 55-gallon drum. Bulking results in a considerable reduction in the overall volume shipped as compared to Gaylord packing due to the elimination of individual cans. Bulking can also result in the contamination of an entire drum's worth of paint if a single contaminated can of paint, or a can of the wrong type of paint, is added to the drum. Because of the potential for problems like this, we suggest you start a paint recycling program only accepting and recycling paint kept in its original container.

Labels

Because the paint is considered a still-usable product by the paint recycling company, it is not classified as a hazardous waste and does not need to meet the New Hampshire Hazardous Waste Rules labeling requirements. However, paint being shipped must meet NH Department of Transportation requirements for shipping and labeling and your transporter or recycler should provide the proper labeling.



Material Safety Data Sheets

Because solvent-based paint is considered a hazardous material, you should have MSDS sheets on file as part of your spill prevention and response plans. Since solvent-based paints have a similar chemical composition, a "generic" MSDS sheet would be suitable. You may download MSDS sheet and safety information from the Internet at several locations, including Safetec at www.msds.com. A generic MSDS sheet for alkyd (solvent based) paint is included with this guide.

Shipping Records

As a still-usable product, paint for recycling is not regulated as a hazardous waste. It neither requires the services of a registered hazardous waste hauler nor the use of a hazardous waste manifest for shipping. However, you do need to have a paper tracking mechanism to prove that the paint was shipped to an acceptable destination facility. Generally, a bill of lading serves this purpose, as it shows who accepted the waste, who transported it, where it was transported to, the quantity transported, and the date it was transported.

Certificate of Recycling

The paint recycling facility should provide a certificate of recycling to show the paint was recycled, rather than treated, disposed of in a landfill or incinerated.

Manifests for Non-Recyclables

If you have accepted non-recyclable, solvent-based paint or contaminated paint as a hazardous waste, it must be managed, shipped and disposed of in accordance with the New Hampshire Hazardous Waste Rules. These rules require hazardous wastes be shipped only by a registered hazardous waste hauler and tracked using a hazardous waste manifest. If your paint recycler is also a permitted hazardous waste hauler, they will have the appropriate manifest form and may transport the non-recyclable paint as a hazardous waste. If they are not registered, you will have to hire a permitted hazardous waste hauler for this service.

Storage Equipment and Facilities

Many programs will accept paint on a year-round or seasonal basis to provide a better service to their community. This is perfectly acceptable as long as the paint is properly stored until removed by a paint recycler. Check with the recycler for their preferred storage requirement; they may want the paint stored in a Gaylord or stored separately so they can inspect the cans prior to packing. In general, paint must be stored so as to protect it from freezing and protected from precipitation. Indoor storage is recommended for these reasons.

For more information, [visit the DES web site](#) or contact DES at 603-271-6460.