

Chemical Hazards

Commonly used paints, like oil, acrylic, watercolor and gouache, may contain heavy metals such as cadmium, chromium, and lead, which can be hazardous to your health and the environment. Also, oil paints contain solvents and require cleanup with solvents, such as turpentine, mineral spirits, or other paint thinners. Oil paints, resins, and solvents pose fire safety hazards. Many of these are corrosive to the skin and cause irritation of the respiratory tract and mucous membranes. They also produce allergic reactions. Precautions when using these materials are imperative to reduce problems.



Unless the pigments listed below are used, the biggest hazard in oil painting generally comes from the use of turpentine or other toxic solvents.

Toxic inorganic pigments include:

- Naples Yellow (Antimony)
- Cobalt Violet (Arsenic)
- All Cadmium Pigments (Cadmium)
- Chromium Oxide Green, Veridian, Chrome Yellow, Zinc Yellow, Strontium Yellow, Naples Yellow (Chromium and Zinc)
- Cobalt Blue, Cobalt Green, cobalt Yellow, Cerulean Blue, Cobalt Violet (Cobalt)
- Flake White, Naples, Yellow, Chrome Yellow (Lead)
- Manganese Blue, Raw Umber, Burnt Umber, mars Brown, Manganese Violet (Manganese)
- Vermillion, Cadmium Vermillion Red (Mercury)
- Zink White (Zinc)



Organic Solvents:

Organic solvents are a class of carbon-based liquids, commonly a component of oil-based paints, printing inks, wood finishes and varnishes. Organic solvents such as lacquer thinner are used in printmaking to remove ink from the plates.

Organic solvents vary widely in their properties and toxicity. They are often volatile, meaning that they evaporate quickly, giving off vapors that may be harmful if inhaled. Some volatile solvents, like ethyl ether, can have an anesthetic effect on the nervous system. Other solvents may cause long-term liver damage or may

otherwise impact the internal organs or nervous system over a long period of time. Many organic solvents are also highly flammable. Their vapors can ignite easily, even at some distance from where the solvent is being used.

Wear gloves and goggles to protect your skin and eyes when handling solvent-based products. Consult the SDS for the solvent you're using to make sure the type of glove you choose will protect against the solvent being used. If the SDS warns against an inhalation hazard, you must work with local exhaust ventilation.

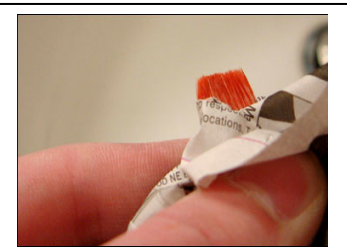
Waste Issues:

Waste paint on applicators is cleaned off by using a lacquer thinner or other mineral spirit. Please reuse the thinner as much as possible. Used thinner should be stored in the cleaning container (usually a ½ pint paint can) and recapped. Paint thinner that is dirty to use must be poured into the supplied container for waste thinner. Contact EH&S for containers and waste pickup.

Follow the recommendations below for cleaning:



Take your brush with one hand and a clean rag with the other, wrapping the rag around the metal part of the brush.



Then, just squeeze as tightly as possible, starting right at the base of the bristles, while pulling the brush back through your fingers. Get as much paint as you can out of the brush. This may take a few times.

Next, take your brush over to the small container of paint thinner and dip it in, scrubbing across the bottom of the container to loosen more paint. Repeat the squeezing technique. Once you've squeezed out the thinner a few times your paintbrush will probably have a little more of its original color back, but there'll still be a paint stain left from the oils. Note: The rag is now considered a hazardous waste and must be put into the red flammable storage can for disposal.



To finish cleaning the brush, pump some liquid soap into the palm of one gloved hand and hold the paintbrush with your other. Scrub the brush back and forth across your palm, letting the soap penetrate the bristles to pull out more oil pigment. When the soap gets too contaminated by the paint, rinse both your hand and the brush with water, over a catch bowl using water sparingly to prevent generating too much waste. This water rinse must be poured into the waste paint water collection drum. Then get more soap and begin scrubbing again. Repeat the process until the soap doesn't change color in your palm, proving that there's no more oil paint stuck in the brush. Rinse out all the soap and use your newspaper one last time to get most of the water out of the bristles.

Note on drum filling. Do not mix Water Based Wash Water with Oil Based Paint Wash Water. Drums are considered full when there is two inches of space left in the drum. Do not overfill the drums.



Place the used thinner into the drum



Pour the wash water into the provided drum



Replace the Cap and tighten.



Note: the use of paper products is an automatic flammable dangerous waste and must be disposed of as hazardous waste. Rags are reusable and not as flammable as paper. Rags will be picked up by EH&S for disposal.

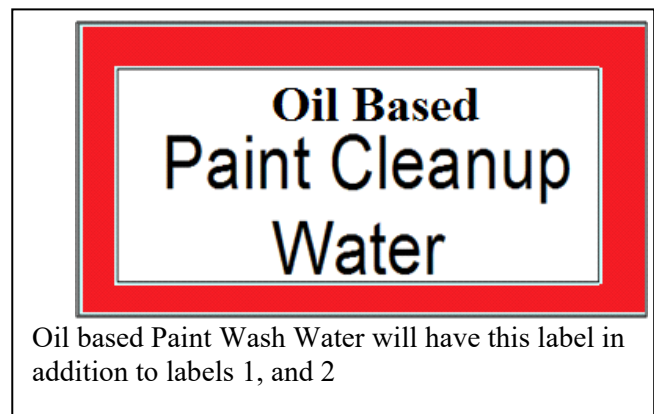
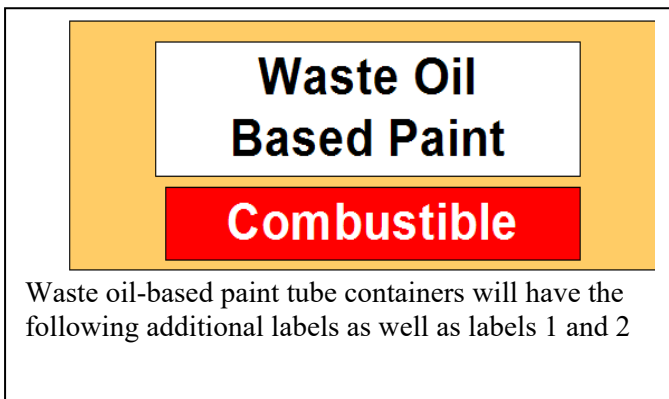
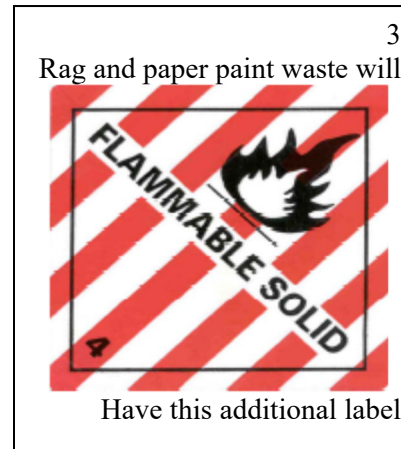
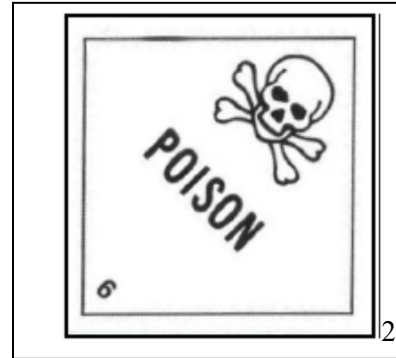
Used paint tubes must be collected and placed into the flammable storage container provided.

Container Labels:

All Containers that have solvent or Oil based paint waste will have the following labels (1 and 2):



In this case the start date is the date you first use the container. Complete Full date is when the container is full. Contact EH&S right away for a pickup. Contents will be whatever is in the container. Waste Paint Tubes; Paint Wash Water; Rags/Paper Waste; etc.



Used solvent wash (turpentine, mineral spirits etc.) will have in addition to labels 1 and 2 this label:



If you have paint cans that have solid or liquid paint waste, contact EH&S for a pickup. EH&S has less than 90 days from when a container is completely full to have it transported off site. So please do not hold on to a full container.

EH&S will supply all waste containers and labels. Contact 2788 or 6455 for containers.

Fill out the Hazardous Waste Pickup Request found on the EH&S Web site under forms.

REVISION HISTORY		
Rev	Affected Page	Change Descriptions
0	All	Release 9/15/12
1	All	Formatting Changes on all pages, 5/29/14
2	All	Reviewed all 12/10/15
3	All	Update to New Format