

University of Missouri Extension

WM6001, Reviewed October 1993

Safe Use, Storage and Disposal of Paint

Marie Steinwachs
Office of Waste Management

Paint is a common product we all have in our homes that can become a household hazardous waste when it is not properly stored or disposed.

The following information will help you make decisions on how to avoid health and environmental hazards from using, storing and disposing of paint.

Composition of paints and their hazards

Most paint has four components: resin, solvent, pigment and additives. To determine the hazardous ingredients of paint, request a Material Safety Data Sheet from the retailer when you buy it.

The **resin** is the main ingredient and forms a coating or film on the surface being painted. This typically non-hazardous component includes linseed, acrylic or other synthetic resins.

The **solvent** keeps the paint in a liquid form until the solvent evaporates after the paint is applied. The solvent in oil-based paint is derived from a petroleum distillate and can include such hazardous ingredients as mineral spirits, toluene and xylene. The solvent in latex paint is water.

Pigments provide the color and opacity or covering power. The major pigments used presently are titanium oxide, iron oxide, calcium sulfate, clay or silicates. These pigments are relatively nontoxic. Some highly colored pigments may contain heavy metals such as chromium, cadmium or arsenic.

Paints purchased before 1977 may contain lead in the pigment. Lead, also a heavy metal, is poisonous. Do not use paint purchased prior to 1977. To determine if the painted surfaces in your home contain lead, contact your local health department or a lead paint removal contractor.

Paint may also have **additives**. Some types of additives include stabilizers that prevent paint deterioration in the can, dryers that assist in the formation of the paint coating, thickeners that aid in application, and preservatives that inhibit the growth of molds. The additives can range in composition, including both hazardous and non-hazardous ingredients.

Some latex paints contain a mercury-based fungicide preservative. Mercury is a heavy metal that is highly toxic. Paints containing mercury produced since August 1990 had to be labeled exclusively for exterior use.

As of August 1991, the United States Environmental Protection Agency prohibits mercury in all newly manufactured paints. The National Paint and Coatings Association has voluntarily complied with these guidelines.

Note

To determine if your latex paint contains mercury, call the National Pesticide Telecommunication Network at 800-858-7378

How to determine if stored paint is usable

- If the paint will mix when stirred, it is probably usable. Oil-based paint can be usable for up to fifteen years. Latex

paint is usable if it is less than ten years old and has not been repeatedly frozen and thawed.

- The best way to determine if latex paint is usable after it has been frozen is to brush the paint on newspaper. If there are lumps, the paint is not usable.

How to store paint so that it will remain usable

- Store the tightly sealed paint can upside-down, so that the paint will form a seal around the lid.
- Store paint cans in dry areas that will not freeze.
- Store paint cans away from sources of spark or flame.

What to do with usable, leftover paint

- Avoid having leftover paint by buying only the amount you need to do the job. Consult with the retailer to determine the surface area and the amount of paint needed to cover this area.
- Use up any leftover paint. Some suggested ways to do this include applying another coat to the surface until the paint is gone, painting a doghouse or other small structure, or using it as a primer coat for another project.
- If you cannot use it up, see if a friend or neighbor is willing to use it. Other groups to contact to see if they need usable latex paint include theater groups, community betterment groups, schools, daycare centers and graffiti removal projects. Before sharing usable latex paint, determine if it contains mercury. If it does, inform your recipient and suggest they use it only for exterior surfaces.
- Your community may sponsor a paint exchange for usable paint. If not, organize a paint exchange between members of local clubs, service organizations or other groups. Inform participants of the paint exchange that latex paint containing mercury should be used only on exterior surfaces. As a general rule, for paint to be usable by someone else, at least 1/3 of a gallon should remain in the original can with a legible label.

Before you hold the paint exchange, identify an organization or outlet that will accept the paint that is not taken, such as theater groups, community betterment groups or schools. For more ideas or guidelines on how to hold a paint exchange, contact the Household Hazardous Waste Project.

What to do with unusable paint

- **Never** put liquid paint into the trash or pour it down the drain unless instructed to do so by local waste officials. Paint disposed of this way can contaminate our water resources and the environment.
- Take the paint to your community's household hazardous waste collection. This is the best option for all unusable paint. If your community does not have a household hazardous waste collection, ask your local city, county and state officials to provide one.
- As a last resort, small amounts of paint can be solidified. If the paint is latex, you can solidify it following the instructions below, then place it in the trash destined for the landfill. Because of the increased health and safety risks involved in solidifying oil-based paints, contact your local city or county officials for other proper disposal methods.

How to solidify paint

Warning

This management option can cause harm to human health and the environment if the described procedures are not followed carefully.

Materials needed

- Protective gloves
- Bucket or sturdy cardboard box
- Stirring stick

Non-flammable absorbent, such as clay-based kitty litter

Warning

Do not use a paper-based product as an absorbent because it could spontaneously ignite.

Safety precautions

- Solidify paint in well-ventilated areas that are inaccessible to children and pets. Do not solidify the paint in a basement or inside the house. If you should feel dizzy or nauseous while working with the paint, take a fresh air break.
- Do not solidify paint in a garage or shed where there is an appliance that uses a pilot light, welding activities, light switch, light bulb, electric garage door or any other source of spark or flame. Volatile, reactive or flammable chemicals can concentrate in an inadequately ventilated room. If the room has a source of spark or flame, the airborne chemicals could explode or cause a fire.
- Do not smoke or drink alcoholic beverages while solidifying paint. Avoid inhalation of fumes. If you can smell it, you are breathing the product. Wear protective gloves to avoid skin contact while handling the paint.

Procedures

- To solidify small quantities, such as an inch or two in the bottom of a can, simply remove the lid, add non-flammable absorbent and stir until all the liquid is absorbed. When the paint is solidified, place the absorbent and paint cans inside a garbage bag, seal the bag tightly and dispose of it in the trash destined for the landfill.
- For larger quantities of paint, mix absorbent and paint in a bucket or sturdy cardboard box and stir. It will be easier if you pour some absorbent in the bottom of the container and add the paint slowly while stirring. Continue to alternate the absorbent and paint and stirring. The end product should be similar in texture to the absorbent. When the paint is solidified, place the absorbent and container inside a garbage bag, seal it tightly, and dispose of it in the trash destined for the landfill.

How to dispose of spray paint cans (aerosols)

- If the cans contain any remaining product, they should be used up following the safety directions on the label. If the spray paint can does not work or the product is unusable, store it safely until a household hazardous waste collection occurs.
- If the spray paint can is empty, it can be placed in the trash. Contact local waste officials to find out if recycling of aerosol cans is available in your community or if the cans may be placed in the trash.

How to dispose of empty paint cans

- Leave the lid off the paint cans so that the hauler can see that they are empty. Place the empty paint cans and lids along side or on top of your trash.

Other sources of information

- The Center for Safety in the Arts provides information on safe use and selection of art materials. Contact them by calling 212-227-6220 or write to the Center for Safety in the Arts, 5 Beekman Street, Suite 1030, New York, N.Y. 10038.

The *Guide to Hazardous Products Around the Home* is a personal action manual for protecting your health and the environment. This comprehensive, 178-page handbook explains product ingredients, safety issues, disposal, recycling outlets, safer product alternatives, and more! Promoted by Greenpeace, the United Nations Environmental Programme, 50

***Simple Things You can do to Save the Earth and The Green Consumer.* The Guide was written by the Household Hazardous Waste Project, winner of the 1991 President's Environment and Conservation Challenge Award.**

The Household Hazardous Waste Project assumes no responsibility for any injury or damage resulting from the use or effect of any product or information specified in this publication.

Copyright 1994 by the Environmental Improvement and Energy Resources Authority. Published by the MU Extension Household Hazardous Waste Project in cooperation with EIERA.

Related MU Extension publications

- WM6000, Safe Use, Storage and Disposal of Pesticides
<http://extension.missouri.edu/p/WM6000>
- WM6002, Selecting Household Safety Equipment
<http://extension.missouri.edu/p/WM6002>
- WM6003, Household Hazardous Products
<http://extension.missouri.edu/p/WM6003>
- WM6004, Managing Household Hazardous Waste
<http://extension.missouri.edu/p/WM6004>
- WM6005, Store Hazardous Products Safely
<http://extension.missouri.edu/p/WM6005>
- WM6006, Identifying Product Hazards: Material Safety Data Sheets
<http://extension.missouri.edu/p/WM6006>
- WM6007, Setting Up a Used Antifreeze Collection Site
<http://extension.missouri.edu/p/WM6007>
- WM6009, Setting Up a Used Latex Paint Collection Site
<http://extension.missouri.edu/p/WM6009>
- WM6010, Setting Up a Used Oil Collection Site
<http://extension.missouri.edu/p/WM6010>
- WM6011, Storm Drains and Water Quality
<http://extension.missouri.edu/p/WM6011>

Order publications online at <http://extension.missouri.edu/explore/shop/> or call toll-free 800-292-0969.



■ Issued in furtherance of the Cooperative Extension Work Acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. Director, Cooperative Extension, University of Missouri, Columbia, MO 65211
■ an equal opportunity/ADA institution ■ 573-882-7216 ■ extension.missouri.edu