

## Disposing of Hazardous Wastes from the Home

# SOLVENTS AND HOME CLEANING PRODUCTS

by Elaine Andrews

### GENERAL INFORMATION

Many household cleaners have corrosive chemical ingredients and may cause short-term and long-term health hazards if not used according to label directions. Problems can range from mild skin irritations to respiratory failure. These problems occur most often because chemicals are used improperly. Read the label before using any home cleaning product and never mix products unless directed by the label.

Some cleaners include “organic solvents” such as petroleum distillates. Organic solvents do not dissolve in water and are used to dissolve difficult stains or greases. Although solvents are useful, they can cause health hazards if improperly used or thrown away. Short-term poisoning symptoms include dizziness or nausea within a day after use. Long-term exposure—occurring when solvents are used on a regular basis over a long time—can cause liver damage, cancer, or birth defects.

If you have a septic system for waste disposal, you need to take special precautions when disposing of cleaning products. Septic systems can only partially treat chemical wastes. Waste water from the septic system is discharged into the ground and can move back into well water. Septic system users should attempt to use up, share, or evaporate unwanted products.

This publication explains how to identify cleaners containing solvents and how to dispose of solvents as well as abrasive cleaners, aerosols, bleach, detergents, drain openers, general home liquid cleaners, germicides/disinfectants, oven cleaners, rug and upholstery cleaners and bathroom cleaners.

If you have further questions about disposal of specific home cleaning products not described in this brochure or other hazardous home products, please call your local or county public health or solid waste department or your county extension agent.

**PLEASE NOTE:** In view of rapidly changing information about the toxicity of hazardous substances, readers are cautioned to take personal responsibility for following the guidelines in this brochure. If you need additional advice, contact your county extension office or your district DNR office hazardous waste section.

### Identifying Organic Solvents

Your cleaning product may contain an organic solvent if it meets one or more of the following criteria:

- 1) It hardens on surface after application (such as polishes or waxes).
- 2) It is used to dissolve difficult stains or greases.
- 3) The label says the product is flammable.
- 4) It comes in an aerosol can (such as air fresheners or oven cleaners).
- 5) It is used as a:
  - home deodorizer
  - spot remover/dry cleaning fluid
  - polish or wax (furniture, metal, shoe, etc.)
  - hardwood floor cleaner
  - rug and upholstery cleaner (some are detergent-based)
  - disinfectant

*(Continued)*

## Identifying Organic Solvents *(continued)*

- 6) The product contains one of the following chemicals:
- benzene (listed separately or as part of an ingredient name)
  - carbon tetrachloride
  - chlorinated solvents
  - diethyl or dimethyl phthalate
  - methylene chloride
  - paradichlorobenzene
  - perchloroethylene (same as tetrachloroethylene)
  - petroleum distillates
  - phenol (listed separately or as part of an ingredient name)
  - toluene (mineral spirits)
  - 1,1,1 trichloroethane
  - xylene

This is only a short list of organic solvents. Please call your local or county health or solid waste department or county extension agent if you have any doubt about your product. Check other UW-Extension *Disposing of Hazardous Wastes from the Home* brochures for information about other home products containing organic solvents.

## Disposing of Solvent Cleaners

If your unwanted product contains an organic solvent, don't throw it in the trash. Instead, try to use it up, share it with a neighbor, friend or community organization, evaporate small quantities (less than half a gallon) and dispose of hardened material in the trash, or save it for a household hazardous waste collection program.

If you choose the evaporation method, you can dispose of the remaining hardened material in the trash because the chemicals are usually locked into the solid and won't leach into the soil. However, burning the solids releases the chemicals and may raise the level of potentially toxic chemicals in the ash. For that reason, if your community incinerates trash, check with your municipal sanitation department to see whether you need to separate organic solvent solids from the trash to be burned.

Home products containing an organic solvent *should not* be evaporated in urban areas experiencing summer ozone alerts due to smog conditions. You can use it, share it or wait out the ozone alert.

### TO EVAPORATE:

- Move the container to a sheltered, secure outdoor area away from flames, children and pets.
- Open the lid and allow liquid to dry.
- Discard hardened material in the trash.

## DISPOSING OF THE REST...

### Abrasive Cleaners

Share, if possible. Or flush<sup>1</sup> small amounts down a toilet or kitchen drain with plenty of water.

### Aerosols

Share. Avoid using when possible.

Many home products sold as aerosols (for example, oven, bathroom and rug cleaners) contain organic solvents even though the solvent is not used for cleaning. The organic solvent is included to dissolve or propel the cleaner. Because the solvent does not play an active role in the cleaning process, it may not be listed as an ingredient. If you purchase an aerosol cleaning product, use it up or share it. Only empty aerosols should be thrown in trash.

Materials in clogged aerosol sprays may still be usable. Unclog aerosol spray cans carefully by cleaning the slit at the end of the spray button stem. Replace parts and turn can upside down and spray for a few seconds.

If you can't use or share your aerosol, spray the remaining ingredients into a box while outside and away from flames, pets and children. Avoid breathing the fumes.

### Ammonia

Share, if possible. Or flush<sup>1</sup> down toilet or kitchen drain with plenty of water.

Do NOT mix ammonia and bleach. The combination forms a deadly gas. If you have a septic system, minimize both use and disposal of ammonia. Ammonia adds

nitrogen to septic water discharges which may contribute to health problems in drinking water.

**Bleach** Share, if possible. Or flush<sup>1</sup> down toilet or kitchen drain with plenty of water.

Bleach is extremely irritating to skin. The prime ingredient is usually a strong acid, but varies depending on product. NEVER MIX BLEACH WITH AMMONIA. Bleach is very reactive and forms a deadly gas when combined with ammonia. If you have a septic system, minimize both your use and disposal of bleach. The chlorine in bleach may interact with other chemicals in your septic system to make “chlorinated hydrocarbons.” Chlorinated hydrocarbons may cause a variety of health problems in people and animals.

**Detergents** Share, if possible. Or flush<sup>1</sup> small amounts down laundry drain with plenty of water.

**Drain Openers** Share. Evaporate if organic solvent is present. Flush<sup>1</sup> small amounts down drain if no solvent is present.

Most drain openers are made of a strong acid or base. If it contains an organic solvent, refer to the solvent disposal directions described earlier.

**General Home Liquid Cleaners** Share. Evaporate if organic solvent is present. If it is a detergent only, flush<sup>1</sup> down drain.

Home liquid cleaners may contain organic solvents, detergents, or ammonia. Follow the advice listed for the appropriate ingredient.

**Germicides/ Disinfectants** Share. Save for household hazardous waste collection program if it is labeled “germ proofing” or if chlorophenol is listed in the ingredients. Evaporate if an organic solvent is present. If no solvent is present, flush<sup>1</sup> small amounts down drain.

Recently purchased, unwanted home disinfectants can be flushed down the drain, but industrial-strength disinfectants should be packaged and saved for a hazardous waste program.

**Oven Cleaners** Share, if possible. Or flush<sup>1</sup> small amounts down kitchen drain or toilet with plenty of water.

Most oven cleaners are made of a strong base such as sodium hydroxide or lye. Use them carefully. Refer to directions for disposing of aerosols if you have an unwanted aerosol oven cleaner.

**Rug and Upholstery Cleaners** Determine main ingredient.

Refer to “Identifying organic solvents.” If your product contains an organic solvent, follow solvent disposal directions. Other cleansers contain detergents and may be disposed of by flushing down drain with lots of water.

**Toilet, Tub and Tile Cleaners** Share. Flush<sup>1</sup> small amounts down drain with lots of water.

Many toilet, tub and tile cleaners are made of strong acids. Unwanted cleaners could be shared. Strong acids can be flushed down the toilet or drain with lots of water. Never mix different bathroom cleaners such as lye, ammonia or bleach.

<sup>1</sup>WHEN FLUSHING HOME CHEMICALS Chemicals will interact and sometimes produce new toxic chemicals or gases. Flush your product down a clean toilet or washtub and thoroughly rinse before adding any other chemicals such as toilet bowl cleaner or cleanser. Some chemicals which can be safely flushed into a municipal sewage treatment system should not be flushed to a home septic waste water treatment system except in small amounts. If no other disposal alternative is available, wrap product container in newspaper and plastic and dispose in landfill.

**More Information:** Related Publications from the University of Wisconsin-Extension

- G3453, *Disposing of Hazardous Wastes from the Home: Home and Garden Pesticides*
- G3454, *Disposing of Hazardous Wastes from the Home: Paint and Other Home Improvement Products*
- G3456, *Disposing of Hazardous Wastes from the Home: Waste Oil and Other Automotive Products*
- G3026, *Chemical Hazards in the Home: Pesticides*
- G3027, *Chemical Hazards in the Home: Solvents*
- G3028, *Chemical Hazards in the Home: Household Cleaners and Polishes*

*Disposing of Hazardous Wastes from the Home: Product Disposal Guide*, DNR WW-003 86Rev, available from the Environmental Resource Center (608-262-0020) or a DNR District Office.

*Making the Switch—Alternatives to Using Toxic Chemicals in the Home*, is available for \$5 from the Local Government Commission, 909 12th Street, Suite 203, Sacramento CA 95814, (916) 448-1198.

DISPOSAL RECOMMENDATIONS in this brochure are based on household product content descriptions listed in the report *Toxicants in Consumer Products* by Susan Ridgely, funded by an EPA grant and published by the Municipality of Metropolitan Seattle, August 1982 and on EPA household waste hazard class listings found in *A Survey of Household Hazardous Waste and Related Collection Programs*, EPA/530-SW-86-038.

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