



Hazardous Household Waste: Solvents and Home Cleaning Products

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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.

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If you have further questions about disposal of specific home cleaning products not described or other hazardous home products, please call the Department of Environmental Quality at (405) 271-7353, your sanitation department, or your county Extension agent.

Identifying Organic Solvents

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

1. It hardens on surfaces 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 or dry cleaning fluid.
 - polish or wax (furniture, metal, shoe, etc.).
 - hardwood floor cleaner.
 - rug and upholstery clearer (some are detergent-based).
 - disinfectant.
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 the Department of Environmental Quality at (405) 271-7353 or your sanitation department if you have any doubt about a specific product.

Disposing of Solvent Cleaners

If an unwanted product contains an organic solvent, do not 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. The chemicals are usually locked into the solid and will not 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 products:

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

Additional Disposal Guidelines

- **Abrasive Cleaners:** Share if possible, or flush¹ small amounts down a toilet or kitchen drain with plenty of water.
- **Aerosols:** Avoid using when possible. Share if 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 the 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 the can upside down and spray for a few seconds. If you cannot 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 flush¹ down the toilet or kitchen drain with plenty of water.
- **Bleach:** Share if possible, or flush¹ down the 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 flush¹ small amounts down the laundry drain with plenty of water.
- **Drain Openers:** Unwanted or unused products could be shared. Evaporate if organic solvent is present. Flush¹ 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:** Unwanted or unused cleaners could be shared. Evaporate if organic solvent is present. If it is a detergent only, flush¹ down the drain. Home liquid cleaners may contain organic solvents, detergents, or ammonia. Follow the advice listed for the appropriate ingredient.
- **Germicides/Disinfectants:** Share when possible. Save for household hazardous waste collection program if it is labeled as germ proofing or if chlorophenol is listed in the ingredients. Evaporate if an organic solvent is present. If no solvent is present, flush¹ small amounts down the 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 flush¹ small amounts down the 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:** Refer to "Identifying Organic Solvents" to determine main

ingredients. If your product contains an organic solvent, follow solvent disposal directions. Other cleaners contain detergents and may be disposed of by flushing down a drain with plenty of water.

- **Toilet, Tub, and Tile Cleaners:** Flush¹ small amounts down drain with plenty 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 plenty of water. Never mix different bathroom cleaners such as lye, ammonia, or bleach.

¹ 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 chemical such as toilet bowl cleaner or cleanser. Some chemicals that 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.

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The Cooperative Extension Service is the largest, most successful informal educational organization in the world. It is a nationwide system funded and guided by a partnership of federal, state and local governments that delivers information to help people help themselves through the land-grant university system.

Extension carries out programs in the broad categories of agriculture, natural resources and environment; home economics; 4-H and other youth; and community resource development. Extension staff members live and work among the people they serve to help stimulate and educate Americans to plan ahead and cope with their problems.

Some characteristics of the Cooperative Extension system are:

- The federal, state and local governments cooperatively share in its financial support and program direction.
- It is administered by the land-grant university as designated by the state legislature through an Extension director.
- Extension programs are nonpolitical, objective and based on factual information.
- It provides practical, problem-oriented education

for people of all ages. It is designated to take the knowledge of the university to those persons who do not or cannot participate in the formal classroom instruction of the university.

- It utilizes research from university, government and other sources to help people make their own decisions.
- More than a million volunteers help multiply the impact of the Extension professional staff.
- It dispenses no funds to the public.
- It is not a regulatory agency, but it does inform people of regulations and of their options in meeting them.
- Local programs are developed and carried out in full recognition of national problems and goals.
- The Extension staff educates people through personal contacts, meetings, demonstrations and the mass media.
- Extension has the built-in flexibility to adjust its programs and subject matter to meet new needs. Activities shift from year to year as citizen groups and Extension workers close to the problems advise changes.

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