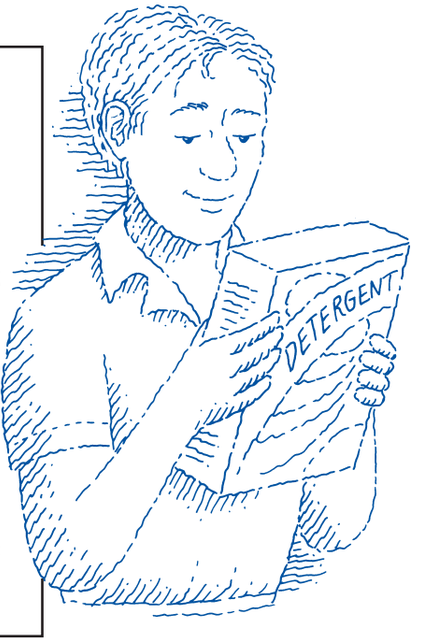
The Hazardless Home Handbook

A Guide to Hazardous Household Products and Effective Alternatives

Read Labels – Look for Signal Words

	Signal word	Meaning
MOST DANGEROUS	Poison	highly toxic
	Danger	extremely flammable, corrosive or highly toxic
	Warning	moderate hazard
	Caution	moderate hazard
SAFEST	No signal word	least hazardous

Signal words are found on labels of new products. Older products in your home may not list signal words. Drugs and personal care products are not required to list them, although many are hazardous.



For poisoning:

Call the Oregon Poison Control Center

1-800-222-1222

toll free

For all other emergencies: Call 911

Acknowledgements

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Disclaimer

A diligent effort has been made to present the most current information in as concise and useful a format as possible on proper disposal methods and alternatives for common hazardous household products used by Oregonians. While all due effort has been made to assure accuracy, the Oregon Department of Environmental Quality and Metro cannot assume any liability for the effectiveness or the results of the procedures or materials described. Use caution with all cleaners, solvents, pesticides and other household chemicals, and keep them out of reach of children and pets.

The Hazardless Home Handbook

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OPEN SPACES

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Hazardous Products in the Home

Most homes have shelves, closets and cupboards stocked with household products that make our lives easier. Stores carry hundreds of brands of cleaners, detergents, polishes, paints, pesticides and other products that promise to be fast, easy and effective. But how safe are they?

As a consumer, you may assume that a product is safe if it's offered for sale. Unfortunately, many household products contain hazardous ingredients that can be harmful when you use them or dispose of them improperly. By understanding what products are hazardous, how to handle them and what alternatives are available, you can make your home and environment a healthier place.

Is it hazardous? Read the label

Read product labels and look for these signal words: ***danger***, ***warning*** or ***caution***. These federally mandated words indicate the degree of immediate hazard posed by the product. Generally, ***danger*** indicates that a product is extremely hazardous, either because it is poisonous, extremely flammable or corrosive. ***Warning*** or ***caution*** indicate products that are somewhat less hazardous. Products listing no signal words are usually the least hazardous.

A product is hazardous when it contains one or more of the following properties:

- Flammable/combustible: Can easily be set on fire or ignited.
- Explosive/reactive: Can detonate or explode through exposure to heat, sudden shock or pressure.
- Corrosive/caustic: Can burn and destroy living tissue.
- Toxic/poisonous: Capable of causing injury or death through ingestion, inhalation or absorption.
- Radioactive: Can damage and destroy cells and chromosomal material.

Dangers of hazardous household products

Health problems and injuries

- Mixtures of some hazardous products can produce dangerous vapors, explosions or fires.
- Products containing acid or lye can burn skin, eyes or respiratory passages.
- Exposure to some pesticides, paints and solvents can cause weakness, confusion, dizziness, irritability, headaches, nausea, sweating, tremor and convulsions.
- Repeated exposure to some chemicals can cause cancer or birth defects.
- Hazardous materials placed in the garbage can seriously injure sanitation workers.

Poisoning

Every day, children and pets become ill or die from eating or drinking toxic products in the home. Many toxic products may look or taste appealing.

Indoor air pollution

Because we spend 80 to 90 percent of our time inside, indoor air pollution can have significant effects on our health. Many household products we use can contribute to making indoor air two to five times more polluted than outside air. In some cases, it can be as much as 100 times more polluted.

Explosions

Accumulated aerosols and other flammable products can ignite or explode when exposed to high heat, flames or pressure, such as in a trash compactor. Burning toxic materials produces toxic fumes.

Environmental damage

Pesticides can kill beneficial insects and birds, not just the destructive insects intended. Fertilizers and pesticides can run off into storm drains, polluting rivers, streams and lakes. Hazardous wastes can end up in our drinking water, rivers and lakes if buried, flushed down the drain or poured onto the ground or into storm drains. Many common household products contribute to air pollution as well.

Reduce hazardous products at home

Shop smart

Buy the least hazardous products you can find to do the job, or try the alternatives listed in this handbook.

When shopping, read a product label carefully to learn about product uses and dangers before you buy it. If the label directions are unclear, ask the dealer or don't buy the product at all. Watch for the signal words ***danger***, ***warning*** and ***caution***. Products that do not bear any of these signal words are considered the least hazardous.

Be aware that some product ingredients can cause long-term or "chronic" health effects. "Chronic" effects take time to appear or be noticed, while "acute" effects are immediate. Products that are inhaled or absorbed through the skin may cause

chronic health effects. Read labels carefully for warnings about breathing vapors or wearing gloves or safety equipment. You may wish to avoid using such products.

Reading labels before you buy a product will help you make the best choice for your health, your family's health and the environment. Choosing the product that's safest to use is usually the safest environmental choice, too.

Buy only what you need

If you must purchase products that are hazardous, buy only what you can use completely. That way you won't have to worry about storage or disposal. If you do have leftovers, try to find someone who can use them. Do not, however, give away old pesticides. Old pesticides can contain chemicals that are now banned (e.g., DDT, Kelthane).

Follow safety precautions

Use proper safety equipment

The label should tell you what equipment you need when using a specific product, but if you're not sure, ask the dealer or call the manufacturer. Gloves help prevent chemicals from being absorbed through the skin. Nitrile gloves, available in safety supply stores, will protect your hands against most products, except strong acids or bases. Products that contain acids or bases require the use of heavy rubber gloves. Chemical splash goggles prevent splashes and vapors from getting in the eyes. Respirators and dust masks prevent inhalation of particulates, mists, vapors and fumes. Be sure to use the right cartridge and filter for the job.

Work in a well-ventilated area

Throughout this handbook, you will find references to working in a well-ventilated area. Many product labels say "use adequate ventilation." You'll find the best ventilation outdoors. Indoors, open as many windows and doors as possible, not just one, to provide maximum air circulation. Position a fan between your work area and an open door or window, with the fan pointed outward, to pull the product fumes or vapors away from the work area and circulate fresh air into the room. A kitchen or bathroom exhaust fan or one open window will not provide adequate ventilation.

Store products safely

When hazardous products are not in use, keep them tightly sealed and stored in a locked cabinet for greatest protection of children, pets and the indoor environment. Keep products in original containers until used up or disposed of, do not mix unless directed, and keep flammable products away from heat, open flames or sparks. Some highly flammable products such as gasoline should be kept in a separate outbuilding if possible. Follow the recommendations on product labels and in this handbook.

Additional precautions

Be sure to thoroughly wash all exposed body parts and clothing when you finish using a product. Wear old clothes, wash them separately and line-dry if possible. To avoid accidental ingestion, be sure to clean up before you eat or smoke, even if you've used gloves. Always wash your hands after using any product.

Put Mr. Yuk stickers on hazardous household products and teach children to leave them alone. These stickers are available from the Oregon Poison Control Center. **Post the number of the Oregon Poison Center by your telephone: 1-800-222-1222.**

Practice safe disposal

If you have unwanted hazardous products that you are not able to give away, dispose of them responsibly. Some household hazardous wastes can be safely disposed in the garbage or diluted and flushed down an inside drain if you are connected to a sanitary system. Do not flush any products if you are on a septic system. Many products should be taken to a household hazardous waste collection site. For information about collection sites in the Portland metropolitan area, call Metro Recycling Information at (503) 234-3000. Outside the Portland area, call your garbage hauler, local government solid waste department or the Oregon Department of Environmental Quality at (503) 229-5913 or toll-free at 1-800-452-4011. For information about scheduled hazardous waste collection events across the state, call 1-800-732-9253.

Properly prepare household hazardous wastes for transport to a collection site.

- Keep products in original containers when possible. If a product does not have its original label, label it yourself if you are sure of the contents.
- Don't mix products together. Dangerous reactions can occur when some materials are mixed.
- Make sure products are properly sealed to prevent leaks and spills. If a container is leaking, secure it inside a second leak-proof container.
- Pack containers in sturdy boxes in the trunk of your vehicle, away from the driver, passengers and pets.

Where does household hazardous waste go?

Most household hazardous wastes are recycled, reused or burned for fuel recovery after they are collected at an event or facility. The remaining wastes are packaged and shipped to a hazardous waste landfill, such as the one at Arlington, Ore., where they are buried.

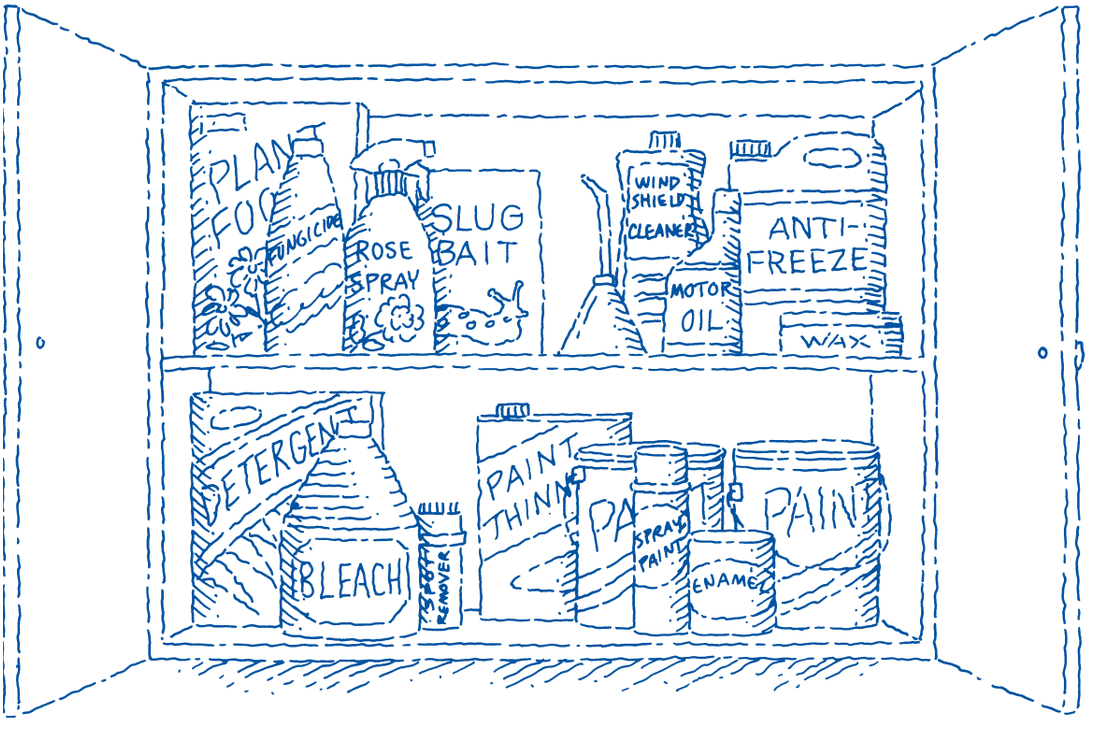
A – Z Guide to Common Hazardous Household Products

This alphabetical guide provides information on common hazardous ingredients, potential hazards, responsible use and storage, proper waste management and alternatives for the most common hazardous household products.

A reference section and a glossary, as well as other reference information, are located in the back of the booklet.

Some disposal options recommended in this handbook may not be readily available in your area. Building and operating permanent household hazardous waste collection and storage facilities or holding periodic household hazardous waste collection events are expensive and relatively recent developments in Oregon. If your county has yet to sponsor a household hazardous waste collection, consider encouraging your local city or county solid waste department to develop this new, safer and environmentally sound disposal option for your area.

The alternative products listed are often safer for your health and the environment. However, keep in mind that some may still present hazards if not used properly.



Adhesives/glues

Common hazardous ingredients

acetates (ethyl, amyl, butyl), acetone, butadiene methyl styrene latex, cyanoacrylate, epoxy resins, formaldehyde, hexane, methly ethyl ketone, methyl isobutyl ketone, methylene chloride, petroleum naphtha phthalates, phenol, polyamide resin, polyvinyl alcohol, toluene (toluol), trichloroethane, xylene (xylol)

Potential hazards

Solvent-based products are the most hazardous type and can be recognized by the words "flammable," "combustible" or "contains petroleum distillates" on the label. Includes rubber cement, epoxy, instant glues, model glues and plastic adhesives. May be extremely flammable or explosive, may be irritating to skin and lungs, or may be corrosive and cause burns to skin and eyes. Narcotic, possibly fatal when inhaled in high concentrations. Air pollutant. Methylene chloride and formaldehyde are suspected human carcinogens.

Use and storage

Use white glue, glue sticks or yellow glue whenever possible. These are the least toxic adhesives currently available. Most other adhesives and glues contain solvents. For adhesives or glues containing solvents, use a non-aerosol application if possible. Buy a minimum amount, follow label directions exactly and use in a well-ventilated area, away from sources of ignition. Avoid wearing soft contacts. The solvent can be absorbed and trapped next to the eyes. Keep container lids tightly closed when not in use and store in a secure area that is locked or out of reach of children and away from sources of heat or flames.

Disposal

Best: Use up or give away. Dispose of empty container in the garbage.

Second best: Uncap instant, white or yellow glue and allow to harden in container. Dispose of solid glue and container in the garbage.

Third best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives

- For gluing wood, china, paper and other porous materials, white or yellow carpenter's glues are the least toxic.
- For gluing paper, paste or a glue stick is safer than rubber cement.
- For pasting up artwork for publication, use a waxer with paraffin.
- For mounting photos, use dry mounting tissues.

Aerosols

Common hazardous ingredients

methylene chloride, nitrous oxide, o-phenylphenol, propane, trichloroethane, trichloroethylene

Potential hazards

Containers may explode if heated; contents may be highly flammable, irritants, corrosives, toxins or poisons. Air pollutant. Methylene chloride is a suspected human carcinogen.

Use and storage

Use in a well-ventilated area (preferably outdoors) and follow label instructions. Avoid breathing vapors. NEVER burn aerosol cans or place them in a trash compactor, even if the cans are completely empty. Prevent nozzles from becoming clogged. Give the spray button a quarter turn before spraying. If a spray opening becomes clogged while the can is in use, turn it upside down and spray for a few seconds. Always do this when you have finished painting. Store in a locked cabinet or out of reach of children and away from sources of heat or flames.

Disposal

Best: Use up or give away.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternative

- Use nonaerosol self-applied products such as gels, roll-ons, liquids or solids. Avoid pump sprays unless there is no available alternative.

Air fresheners/ deodorizers

Common hazardous ingredients

formaldehyde, isobutane, methlyene chloride, naphthalene, o-phenylphenol, p-dichlorobenzene, pine oil, propane

Potential hazards

Harmful to lungs if inhaled in high concentrations or for prolonged periods of time; solid fresheners may be poisonous if eaten by children or pets. Flammable. Air pollutant. Methylene chloride, formaldehyde, and p-dichlorobenzene are suspected human carcinogens.

Use and storage
Follow label instructions. Store in a locked cabinet or out of reach of children and pets and away from sources of heat or flames.

Disposal
Best: Use up or give away. Dispose of empty, nonaerosol containers in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Third best: Dispose of solid leftover product in the garbage.

Alternatives
General
- Open windows and doors for at least a few minutes every day.
- Locate the source of the odor problem and take corrective action.
- Perform home repairs to correct moisture problems. Add vents and vapor barriers, detour water drainage away from the house, etc.

For carpets
- Baking soda will absorb smoking, cooking, pet and other odors that settle into carpeting.

For cutting boards
- Use a baking soda paste and let stand 15 minutes to remove odors such as onion and garlic.

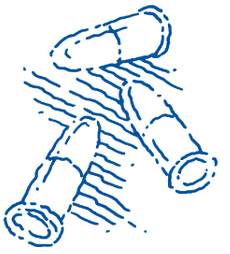
For the refrigerator
- Leave an open box of baking soda in the refrigerator.

For a room
- Pour pure vanilla on a cotton ball in a saucer. Place in car, room or refrigerator. (This is reported to remove even skunk odors.)
- Set out a dish of vinegar or boil 1 tablespoon of white vinegar in 1 cup of water to help eliminate unpleasant cooking odors.
- Simmer cinnamon and cloves.
- Set out herbal bouquets in open dishes.

For a sink garbage disposal
- Grind used lemons in the disposal.
- Pour 1/2 cup of baking soda, followed by 1/2 cup of vinegar, down the drain. Cover drain and let sit 15 minutes. Rinse with 2 quarts of boiling water.

! Most air fresheners/deodorizers do not freshen the air at all. Instead, they mask the unpleasant odor with another odor.

Ammunition



Common hazardous ingredients
gunpowder, gun bluing
contains mercury, selenium

Potential hazards
Explosive, flammable. The primary danger associated with ammunition is accidental discharge. The risk is especially great when children view ammunition as something with which to play. For example, pounding on a bullet with a hammer to see what is inside or throwing ammunition into a fire can lead to an accidental discharge or explosion of the primer cap.

Storage
Store in a cool, dry area that is locked or out of reach of children and pets.

Disposal
Contact your local fire department, police department or bomb squad for disposal. Call the bomb squad in the Portland metropolitan area at (503) 823-4195. Elsewhere in Oregon call (503) 378-3720.

Antifreeze

Common hazardous ingredients
ethylene glycol, methanol, sodium nitrite. Used antifreeze may contain arsenic and chromium compounds.

Potential hazards
Poisonous when swallowed; danger to children and pets; three ounces of antifreeze can kill an adult if swallowed.

Use and storage
Follow label directions. Clean up puddles of antifreeze. Animals are attracted by the sweet smell and taste and can be poisoned. By law, antifreeze available through retail stores in Oregon contains a bittering agent that makes it less palatable. Professional automotive repair facilities are exempt – be sure to ask that the brand put into your radiator contains a bittering agent, or is a less toxic alternative. Absorb accidental spills of antifreeze with an absorbent material such as kitty litter and dispose in the garbage. Store used antifreeze for disposal in a secure area that is locked or away from children and pets.

Disposal
Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternative
- Choose an antifreeze product that has a low level of toxicity. New formulations contain propylene glycol, which is less toxic if ingested. To switch to a propylene glycol formula it is necessary to completely flush the radiator because different formulations cannot be mixed.

! NEVER pour antifreeze down a storm drain or into a ditch where it will directly pollute the water.

Arts and crafts supplies

Common hazardous ingredients
arsenic, barium, benzene, cadmium, chromium, cobalt, copper, formaldehyde, hexane, lead, mercury, methylene chloride, methyl ethyl ketone, toluene, trichloroethane, silica, uranium, zinc

Potential hazards
Flammable, respiratory irritants, air pollutants, toxic. Arsenic, benzene, cadmium and methylene chloride are all known or suspected human carcinogens.

Use and storage
Children under the age of 12 should use only non-toxic art supplies certified by the Arts & Crafts Materials Institute. A free list of institute-certified, nontoxic art products is available from the Oregon Health Division. Call (503) 731-4012 to request this list.

When using art supplies containing toxic ingredients, follow label directions carefully, use in a well-ventilated area, and use recommended safety equipment such as chemical splash goggles, gloves, a respirator and protective clothing. Refrain from eating or drinking while using these products, and wash your hands thoroughly when finished. Store out of reach of children and pets and away from sources of flames.

Disposal
Best: Use up or give away. Dispose of dry, empty containers in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
- Choose water-based inks, paints, glues and cements.
- Use supplies without lead, chromium, cadmium or other toxic pigments.
- For children, choose crayons, grease pencils or other water-based markers.
- Use lead-free solder if possible.
- Use dry mount tissue instead of spray adhesive.

Permanent felt-tip markers, rubber cement, spray fixatives, powdered clay and instant papier-mâché are standard arts and crafts supplies found in many homes. All of these materials may contain chemicals that are hazardous if inhaled, absorbed through the skin or swallowed.

Asbestos

Common hazardous ingredients
Asbestos is the generic name for a group of naturally occurring minerals.

Potential hazards
Products and building materials containing asbestos can release small, invisible mineral fibers into the air when damaged, sawed, drilled, scraped, sanded, shattered, or pulverized**. Inhalation of asbestos fibers can cause asbestos related diseases and cancer.** The latency period or time between exposure and disease symptoms can be 20 to 40 years. Smokers have a 50 to 100 times greater risk of contracting an asbestos-related disease when exposed to asbestos fibers. There is no safe level of exposure to asbestos.

Potential asbestos problems
Most products and materials made today do not contain asbestos. However, until the late 1970s, many types of commercial and residential building products contained asbestos. These products were often not labeled. Some common products that contained asbestos and conditions that may allow release of asbestos fibers include:

- STEAM PIPES, BOILERS and FURNACE DUCTS insulated with asbestos wrapping, block, and paper tape. These materials may release fibers if damaged, repaired or removed improperly.
- RESILIENT FLOOR TILES (vinyl asbestos and asphalt) and the backing on VINYL SHEET FLOORING may release asbestos fibers during removal. Sanding tiles (or using abrasives with buffing machines) can release fibers, as can scraping or sanding the backing of sheet flooring during removal. Some flooring contained asbestos through the mid-1980s.

- CEMENT SHEET, MILLBOARD and PAPER used as insulation or a heat barrier around furnaces and wood burning stoves. Repairing or removing these appliances may release asbestos fibers as may cutting, tearing, sanding, drilling, sawing or shattering insulation.
- CEMENT ROOFING SHINGLES and SIDING These products are not likely to release asbestos fibers unless sawed, drilled, cut, shattered or badly weathered.
- DECORATIVE MATERIAL sprayed on ceilings (common name "popcorn"). Loose, crumbly or water-damaged material may release fibers. Sanding, drilling or scraping will also cause asbestos fibers to be released.
- PATCHING, LEVELING and JOINT COMPOUNDS for walls, ceilings and floors. Sanding, scraping or drilling these surfaces may release asbestos fibers.
- Older household products such as HOT PADS, old IRONING BOARD COVERS and some old HAIRDRYERS.
- AUTOMOBILE BRAKE PADS AND LININGS, CLUTCH FACINGS and GASKETS. Home mechanics may be exposed to asbestos fibers when working on these automotive parts. Most of these products no longer contain asbestos.

What should be done?

At all times, you need to minimize your exposure to asbestos fibers. Locate all suspect asbestos-containing materials in your home or business by having a survey performed for the presence of asbestos. If the materials are in good condition, leave them alone. If the material is damaged or you are going to make changes that may disturb the asbestos containing material (such as remodeling), call the Oregon DEQ at (503) 229-5982 or toll-free at 1-800-452-4011 for more information.

NOTE: DEQ recommends that you hire an asbestos abatement professional to perform all asbestos-related work from sampling to removal and disposal. For more information go to: www.deq.state.or.us/aq/index.htm.

Disposal

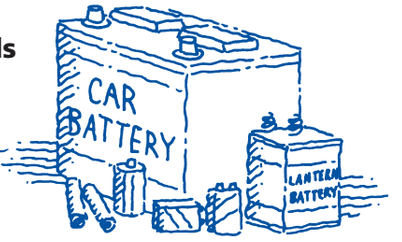
Best: Special authorization is given to landfills that handle asbestos waste. Asbestos-containing materials are in friable form when they can be crumbled by hand pressure or if they are subjected to sanding, sawing, drilling or shattering. For information about proper packaging and labeling of asbestos waste, call the DEQ at (503) 229-5982 or toll-free at 1-800-452-4011 and ask to speak to the regional office for your area (see map on page 39). For the Portland metropolitan area call (503) 234-3000 for more information. Also, call Hillsboro landfill at (503) 640-9427 for disposal information in the Northwest Oregon region.

Second best: Outside the Portland metropolitan area and northwest region of Oregon you may hold small properly packaged and labeled amounts of asbestos containing materials for a household hazardous waste collection event. Call 1-800-732-9253 to find out if there is a hazardous waste collection event in your community.

Batteries, automotive

Common hazardous ingredients

lead, sulfuric acid



Potential hazards

Corrosive; sulfuric acid can cause burns on contact with skin; harmful to eye; irritant if inhaled.

Use and storage

Wear chemical splash goggles and heavy rubber gloves when handling batteries or adding water. Store in a secure area that is locked or away from children and sources of sparks or flames.

Disposal

Best: Trade in your old battery when purchasing a new one. You may get a discount with a trade in. All battery retail outlets are required to take back your old vehicle battery. For information about recycling larger quantities in Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

! In Oregon, it is illegal to dispose of vehicle batteries in the garbage.

Alternative

- Buy longer-life batteries so you have fewer batteries to dispose.

At least 90 percent of all spent lead-acid automotive batteries in Oregon are currently recycled.

Batteries, household

Common hazardous ingredients

cadmium, corrosive electrolytes, lead, mercury, silver (mercury batteries are no longer commercially available)

Potential hazards

Can explode when heated or burned. Internal and external irritation and burns from contact with the chemical substances in the event of an explosion or leakage. Environmental pollution of air and water from toxic heavy metals such as mercury when incinerated or disposed of in unlined landfills.

Use and storage
DO NOT put disk or button batteries in your mouth. They are slippery and easily swallowed. Store all household batteries out of reach of children and pets and away from sources of heat.

Disposal
Best: Recycle. Mercury-oxide and silver-oxide button batteries are sometimes collected by jewelers, pharmacies, hospitals, senior centers and hearing aid stores for shipping to companies that reclaim the metals. Check to find out if one of these organizations is recycling button batteries in your area. Many stores that sell re-chargeable nickel cadmium batteries will take them back for recycling. Call 1-800-822-8837 or visit www.rbrc.com for a location near you or contact a local retailer. In the Portland metropolitan region, call (503) 234-3000 for locations.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Third best: dispose of common household alkaline and carbon-zinc batteries in the garbage. Since 1994 regular AA, AAA, C and D batteries are now manufactured without mercury.

Alternatives
- Avoid battery-operated products.
- Buy rechargeable batteries.

Bleaches, laundry

Common hazardous ingredients
oxalic acid, sodium hypochlorite, sodium perborate, sodium percarbonate, sodium tripolyphophate

Potential hazards
Chlorine bleach is reactive and can form toxic gases when mixed with other cleaners; irritant to eyes and mucous membranes; corrosive.

Use and storage
Wear heavy rubber gloves when using. Use in a well-ventilated area. Keep the container lid tightly closed when not in use and store out of reach of children and pets.

Disposal
Best: Use up or give away. Rinse the empty container and dispose of in the garbage.

Second best: If your home is connected to a city sewer system and you are unable to use or give away leftover bleach, flush small amounts down an inside drain (toilet is preferable) with lots of water. If you are on a septic system, flush very small quantities over several days.

Third best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
- Reduce the amount of chlorine bleach needed by half by adding 1/2 cup baking soda to top-loading machines or 1/4 cup to front loaders.
- Use oxygen bleaches 1/2 cup per load.
- Use hydrogen peroxide based bleaches.

Note: Hydrogen peroxide in dilute solutions may be a lesser hazard than chlorine in some ways, but neither product is hazard free. Use these kinds of products infrequently or, if possible, not at all.

! NEVER mix chlorine bleach with ammonia or with any acid, including vinegar. When combined, these compounds produce chloramine gas, a toxic vapor!

Brake fluid

Common hazardous ingredients
methyl, ethyl and butyl ethers of ethylene glycol. Used brake fluid contains lead and other heavy metals.

Potential hazards
Flammable; toxic; harmful or fatal if ingested; water and soil pollutants if poured on the ground, into a ditch or down a storm drain.

Use and storage
Avoid contact with skin. Wash hands after use. Store with lid tightly closed in a locked cabinet or away from children, pets and sources of flames or sparks. If the metal container in which the brake fluid is stored begins to rust, place the container inside a larger plastic container.

Disposal
Best: Use up or give away. Dispose of empty container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Charcoal lighter fluid

Common hazardous ingredients
benzene, naphthalene, petroleum distillates, toluene, xylene

Potential hazards
Toxic; ignitable, air pollutant. Benzene is a known human carcinogen.

Use and storage
Use according to label directions. Avoid inhaling vapors or contact with your skin. Do NOT use indoors. Keep container lid tightly closed when not in use and store in a locked cabinet or out of reach of children and away from sources of flames.

Disposal
Best: Use up or give away. Dispose of empty container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
- Use an electric charcoal lighter.
- Use a charcoal chimney starter available at retail stores, or you can make your own.
- Use a gas barbecue, if available.

Chemistry sets

Common hazardous ingredients
acids, bases, heavy metals, various toxic salts

Potential hazards
Reactive; corrosive; flammable.

Use and storage
Use chemical splash goggles. Keep lids of chemicals tightly closed when not in use and store out of reach of small children and away from sources of flames.

Disposal
Best: If the set contains picric acid, contact your local fire department for disposal.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternative
- Choose less hazardous experimental sets suitable for the intended user's age level.

Cleaners, general household

Common hazardous ingredients
ammonia, dichloro (or trichloro) isocyanurate, glycol ethers, oxalic acid, phenols, sodium carbonate, sodium hypochlorite, sodium metasilicate, tripolyphosphate, trisodium phosphate

Potential hazards
Mildly to extremely irritating to skin, eyes, nose and throat; corrosive if swallowed. Air pollutant.

Use and storage
DO NOT MIX AMMONIA-BASED CLEANERS WITH BLEACH-BASED CLEANERS. HAZARDOUS FUMES WILL RESULT. Wear gloves and use with adequate ventilation. Keep container lid tightly closed when cleaner is not in use. Store in secure area.

Disposal
Best: Use up or give away. Dispose of empty nonaerosol container in the garbage.

Second best: If your home is connected to a city sewer system, flush small amounts of water-soluble liquid cleaners down an inside drain (toilet is preferable) with plenty of water. If you are on a septic system, flush very small quantities over a number of days. Place small amounts of powdered or solid cleaner in a heavy-duty plastic bag and dispose of in the garbage.

Third best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
For general cleaning
- Instead of chemical cleaners, use soap and water, baking soda or lemon juice.
- Use either of the following mixtures in a spray bottle to clean countertops, floors, walls, carpet and upholstery.
  - Dissolve 4 tablespoons baking soda in 1 quart warm water.
  - Use a mixture of 1/2 cup vinegar and 1 cup to 1 quart of warm water.

- Mix vinegar and salt together for a good surface cleaner. Will remove grease if vinegar is at full strength.
- For an abrasive cleaner, use baking soda or a nonchlorinated scouring powder.
- A pumice stick, available at many hardware stores, contains no harsh detergents or other chemicals. It effectively cleans ovens, racks, barbecues and grills; removes rust from garden tools and iron stains from toilet bowls; and handles many other tough cleaning jobs.

For aluminum
- To remove stains and discoloration from aluminum cookware, fill cookware with hot water and add 2 tablespoons cream of tartar to each quart of water. Bring solution to a boil and simmer 10 minutes. Wash as usual and dry.
- To clean an aluminum coffee pot and remove lime deposits, boil equal parts of water and white vinegar. Boiling time depends upon how heavy deposits are.

For automatic-drip coffee makers
- To remove mineral deposits and unclog coffee makers, run 1 cup vinegar through the machine as you would water, followed by two pots of water to remove vinegar taste. Minimize odor by using the kitchen exhaust fan and opening a window.

For dishwashing/laundry
- See "Detergents, dishwashing/laundry" listing.

For drains
- See "Drain cleaners" listing.

For floors
- Damp mop linoleum using a mild detergent and water for day to day cleaning.
- For a vinyl floor, use 1/2 cup white vinegar with 1 gallon water.
- For a wood floor, damp mop with mild vegetable oil soap.
- To remove black heel marks, rub with a paste of baking soda and water.
- To remove crayon marks, rub with toothpaste and a damp cloth (will not work well on wallpaper or porous surfaces).

For metal
- See "Polishes/cleaners, metal" listing.

For stains
- See "Stain/spot removers" listing.
- To remove coffee and other stains on dishware, scrub with baking soda.

For toilets
- Scrub regularly with a toilet brush and non-chlorinated scouring powder.

For windows
- Mix 1/4 cup of white vinegar or 2 tablespoons of lemon juice and a quart of warm water in a spray bottle. Use as you would any window cleaner.

! The average person in the US uses 40.6 pounds of household cleaners each year.

Degreasers, automotive/ garage

Common hazardous ingredients
carbon tetrachloride, methylene chloride, methyl ethyl ketone, perchloroethylene, toluene, trichlorethylenexylene

Potential hazards
Flammable, extremely toxic, air pollutants. Carbon tetrachloride and methylene chloride are suspected human carcinogens.

Use and storage
Use according to label instructions in a well-ventilated area. Keep container lid tightly closed when not in use and store in a locked cabinet or away from children.

Disposal
Best: Use up or give unused degreaser to a service station, auto shop, technical college or neighbor. DO NOT mix unwanted degreaser with used crankcase oil. This contaminates the oil and could make it unacceptable for recycling.

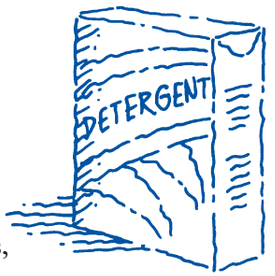
Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
For general cleaning
- Select citrus-based degreasers over solvent types.

For battery terminals
- Use a baking soda and water paste to clean away corrosion. After reconnecting the terminals, wipe with petroleum jelly to prevent future corrosion.

For grease spots on the garage floor
- Sprinkle kitty litter or cornmeal on the spot. Allow to sit for several hours, then sweep up and dispose of in the garbage.

Detergents, dishwashing/ laundry



Common hazardous ingredients

cationic and anionic detergents, phosphates, sodium carbonate, sodium perborate (brightener), various surfactants

Potential hazards

May be harmful if swallowed or cause mild to severe irritation and burns from skin and eye contact; liquid dishwashing detergent is the least hazardous.

Use and storage

Carefully read labels to determine the hazards associated with the detergents in your home. Keep container lids tightly closed when not in use and store in a secure area with child-resistant cabinet latches or on a high shelf out of reach of children and pets. Powdered rather than liquid detergents may be a safer choice if you have small children in the home, since powdered detergents are less likely to be swallowed accidentally.

Disposal

Best: Use up or give away. Rinse out empty container and recycle if the type and color of plastic or paperboard is recyclable in your area. Call Metro Recycling Information in the Portland metropolitan area at (503) 234-3000 or your garbage hauler or local recycling center for container recycling information. If containers are not recyclable, dispose of in the garbage.

Second best: Flush household amounts of unwanted liquid detergent down an inside drain with plenty of water. Dispose of unwanted powdered detergents in the garbage.

Third best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives

- Use the mildest product for your needs. Liquid dishwashing detergent and laundry soap are mildest, laundry detergent is moderate and automatic dishwashing detergent is harshest.

For dishwashers

- Use half the recommended amount of automatic dishwashing detergent.

For laundry

- Use white vinegar as a laundry helper. Adding 1 to 2 cups of vinegar to the final rinse eliminates soap residue. Vinegar also breaks down uric acid, which is present in urine. Add 1 cup of vinegar to rinse water when washing baby clothes. WARNING: DO NOT USE VINEGAR IF USING CHLORINE BLEACH. IT WILL PRODUCE TOXIC VAPORS.

Disinfectants

Common hazardous ingredients

ammonia, aromatic hydrocarbons, cationic detergents, formaldehyde, hydrocarbon solvents, lye (sodium or potassium hydroxide), monoethanolamine, phenols, pine oil, quaternary ammonium chlorides, sodium borate (borax), sodium hypochlorite, triethanolamine

Potential hazards

Irritant, may be flammable or corrosive. Air pollutant. Recent studies suggest that overuse of household antibacterial produces may lead to an increase in bacteria that are resistant to disinfectants or anti-bacterial cleaners.

Use and storage

Use according to label instructions. Avoid aerosol dispensers to reduce exposure to hazardous vapors. Use chemical splash goggles and heavy rubber or nitrile gloves to protect from corrosive effects. Use in a well-ventilated area. Do not use around food, pets or children. Keep container lid tightly closed when not in use and store out of reach of children.

Disposal

Best: Use up or give away. Dispose of empty, nonaerosol containers in the garbage.

Second best: If connected to a city sewer system, flush small amounts of disinfectants down an inside drain (toilet is preferable) with plenty of water.

Third best: If you are on a septic system or have aerosol containers, take to a household hazardous waste facility or collection event.

In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000 for instructions. Elsewhere in Oregon, call 1-800-732-9253.

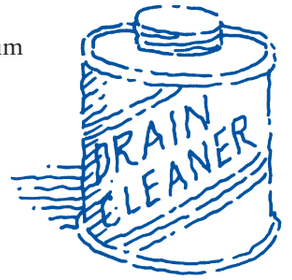
Alternatives

- Rubbing alcohol is a disinfectant, although it is extremely flammable and toxic if ingested. Use in a well-ventilated area far from possible sources of ignition. Wear nitrile gloves. Apply to surface with a sponge and allow to dry.
- For kitchens and bathrooms, spray surface with distilled white vinegar, then spray with 3-percent hydrogen peroxide solution and wipe clean.

Drain cleaners

Common hazardous ingredients

hydrochloric acid, lye (sodium or potassium hydroxide), sodium hypochlorite, sodium nitrate, sulfuric acid, trichlorobenzene, trichloroethane



Potential hazards

Irritant, highly corrosive.

Use and storage

Use according to label instructions. Avoid adding a drain opener to a toilet bowl that contains toilet bowl cleaners. Do not mix with bleach. Do not allow to splash or touch skin or eyes. Cover exposed skin and wear chemical splash goggles and heavy rubber gloves. Avoid breathing vapors. Keep container lid tightly closed when not in use and store in locked cabinet or out of reach of children.

Disposal

Best: Use up or give away. Dispose of empty container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives

- An ounce of prevention will save you pounds of trouble. Use a drain strainer to trap food particles and hair. Collect grease in cans instead of pouring it down the drain. Pour a kettle of boiling water down the drain weekly to melt fat that may be building up.
- Remove the trap and clean out the obstruction with a plunger and/or a plumber's snake.
- For clogged kitchen drains, pour 1/2 cup of baking soda, followed by 1/2 cup of vinegar, down the drain. Cover drain and let sit 15 minutes. Rinse with 2 quarts of boiling water. The pressure created by the heat of the chemical reaction is often enough to open a clogged drain. A good preventive measure is to give your drains a weekly baking soda and vinegar treatment. It will also keep them smelling fresh.

Fertilizers, chemical

Common hazardous ingredients

ammonium nitrate, ammonium phosphate, ammonium sulfate, copper salts, lime, pesticides, potassium chloride

Potential hazards

Harmful if ingested in large quantities or if fertilizer contains pesticides. Single ingredient fertilizers such as ammonium nitrate are corrosive to the skin, eyes and mucous membranes. Both chemical and organic fertilizers can pollute surface and groundwater. Some fertilizers also contain weed killers. Read labels carefully!

Use

Fertilize only as local knowledge or soil tests indicate a need. Use only moderate amounts of both chemical and organic fertilizers to limit the possibility of water pollution. Read the label instructions before using and follow them carefully when applying. Wear nitrile gloves when handling. Don't apply fertilizer if a heavy rain is predicted. Use caution on slopes and lawn edges so fertilizer will not wash into lakes, streams or storm drains. Use a slow-release fertilizer with at least 50 percent of the nitrogen in insoluble form. Calculate and apply carefully, no more than 1 pound of actual nitrogen per 1,000 square feet of area per application. Lawns usually need a fertilizer application in October or November and another in mid to late spring. West of the Cascades, the most important fertilization time is the fall. Fertilizers with weed killers (pesticides) are not recommended for lawns because they do not target weeds effectively, often result in unnecessary application of pesticides and may cause damage or death to nearby trees and shrubs.

Storage

Keep leftover fertilizer tightly sealed in a clearly labeled plastic bag and store in a secure area away from children, pets and moisture.

Disposal

Best: Use up or give away. If the fertilizer does not contain pesticides (does not say "Weed" or "Weed Killer" in the product name), dispose of the empty container or packaging in the garbage. If the fertilizer contains pesticides, follow the directions under "Pesticides" to prepare and dispose of empty containers.

Second best: Unwanted fertilizer that does NOT contain pesticides should be placed in a heavy-duty plastic bag and disposed of in the garbage. Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

The most important step to create and maintain a healthy garden is to take very good care of your soil. In order to understand the nutrient status of your soil, have it tested – call OSU extension for a list of providers – or test it yourself with a home soil test kit. Add lots of organic matter, grow cover crops, and correct soil pH problems in order to get the most out of your soil. Your local OSU County Extension Office or Oregon Tilth in Salem at (503) 378-0690 can provide you with more information about soil care and locations to have your soil tested.

Organic vs. chemical

Organic fertilizers are made from animal or plant parts or byproducts and are naturally high in one or more elements needed by growing plants (e.g., nitrogen, phosphorus or potassium). Chemical, or synthetic, fertilizers are not made from plants or animals that are produced to be high in one or more elements needed by growing plants. Synthetic fertilizers tend to be water soluble and more concentrated, hence more easily overused and more likely to end up in waterways.

Alternatives

- Significantly reduce the need for lawn fertilizer and watering by planting an ecology lawn, a mixture of legumes, flowering plants, grass and regional native plants to create a pleasing and non-demanding ground cover. Contact your local OSU County Extension Office for information.
- See Natural Gardening information in the Resource Section on page 37.
- Reduce the need for lawn fertilizer by mowing your lawn frequently to a height of about three inches and leaving the grass clippings on the lawn.
- Use compost. Compost can improve flower bed and garden soil structure, stability and drainage while slowly releasing nutrients essential for plant growth. Compost can be made from grass clippings, yard prunings, dead leaves, and fruit and vegetable kitchen wastes. For help getting started with composting, contact your local OSU County Extension Office Master Gardener program, Metro Recycling Information at (503) 234-3000 in the Portland metro area (Metro provides free workshops and materials on composting), or Oregon Tilth at (503) 691-9810 or (503) 620-2829.
- Use natural soil amendments. Natural soil amendments release nutrients slowly over a longer period of time than chemical fertilizers. Use blood meal, fish meal, fish emulsion, seed meals, bone meal, rock phosphate, greensand, kelp meal, manure and compost to help supply necessary nutrients to plants.

Fingernail polish/ remover

Common hazardous ingredients

acetone, benzene, ethyl acetate, formaldehyde resin, phenol, toluene, tricresyl phosphate, xylene

Potential hazards

Flammable, highly toxic, vapors easily inhaled, irritant to skin and mucous membranes, air pollutant. Benzene is a known human carcinogen.

Use and storage

Avoid using fingernail polish or remover if you are pregnant. Use according to label instructions. Minimize exposure to vapors by turning on the bathroom exhaust fan and opening a window when using these products and leaving the room after you have applied them. Keep bottles capped when not in use and store away from children.

Disposal

Best: Use up or give away. Dispose of empty container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives

- There is a toluene-free nail polish available commercially that is somewhat less toxic.
- Buff your nails to create a sheen without polish.
- Consider leaving your nails unpolished.

Fluorescent lights/ ballasts/HID lamps

Common hazardous ingredients

mercury, polychlorinated biphenyls (PCBs)

Potential hazards

Small amounts of metallic mercury are present in all fluorescent light tubes, compact-fluorescent lamps, mercury vapor lights and high intensity discharge lamps (HID). Metallic mercury vapors are harmful if inhaled and pollute the air, soil and water when incinerated or landfilled. PCB is contained in the black rectangular ballasts of fluorescent light fixtures manufactured before 1978. PCB, an oily substance, is harmful if inhaled, ingested or absorbed through the skin. It is also a suspected human carcinogen.

Disposal of fluorescent light fixtures and HID lamps

Recycle. There are some options available for recycling of fluorescent tubes and fixtures. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, contact the DEQ at 1-800-732-9253.

In the event of breakage:

See "Mercury Containing Products." Always dispose of broken materials at a household hazardous waste facility or event, if possible. Call the numbers above for more information.

Disposal of ballasts containing PCB

Assume a ballast contains PCBs unless it bears a label stating it contains NO PCBs or was manufactured after 1978. Ballasts sometimes develop leaks. Any liquid dripping from an overhead fluorescent fixture is probably from the ballast and may be PCB. Have an electrician replace the ballast. Using a plastic bag over your hand as a glove, clean up the spills with soapy water on paper towels. Holding the used towels and ballast with your hand inside the bag, turn the bag inside out with your other hand, leaving the towels and ballast inside. Seal the bag. Wash your hands. Bring to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternative

- Use low-mercury fluorescent lamps. Check with your local lighting supply retailers to see if they carry them.
- See Oregon DEQ's fluorescent lighting fact sheet: www.deq.state.or.us/wmc/solwaste/factsheets/FluorescentLamps.pdf

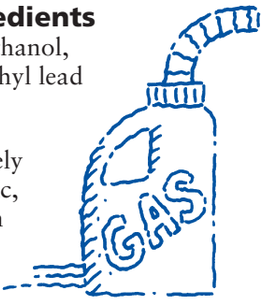
Gasoline

Common hazardous ingredients

benzene, ethylene dichloride, methanol, petroleum, hydrocarbons, tetraethyl lead

Potential hazards

Ignitable, highly volatile, extremely flammable, explosive, highly toxic, air pollutant. Benzene is a known human carcinogen.



Use

Never smoke around gasoline. Avoid breathing the vapors when fueling your lawn mower and request gas station attendants not to "top off" your vehicle's tank. Never siphon gasoline using your mouth (can be fatal if one teaspoon goes into the lungs). When handling gasoline, wear nitrile gloves and thoroughly wash your hands when finished and before eating or smoking.

! Never mix gasoline with waste oil or other automotive products, and never use as a cleaner solvent.

Storage

Gasoline is probably the most dangerous product commonly found around the home because of its volatility and toxicity. Sparks and flames can ignite gasoline vapors at great distances from the container. Gasoline under pressure in a non-venting container can explode.

- Store no more than 10 gallons. The less you have around, the safer you'll be.
- Use only self-venting containers approved by a nationally recognized testing lab (such as UL) and always leave an air space for expansion.
- If possible, store in a storage shed well away from living areas.
- Store at ground level, not up on a shelf. In the summer, in a closed garage or shed, temperatures up on shelves can be much higher and may create a dangerous pressure level in the container. Don't store in your car's trunk. Keep out of direct sunlight.
- Leave a screened garage or shed window partially open so vapors can be vented outside and will not build up to a dangerous level. Never store gasoline in a basement! Washers, dryers and any motor-driven machinery can be ignition sources. Keep gasoline away from your furnace!

Disposal

Best: Use up as an engine fuel. Strain old gasoline through a paint filter, dilute by one half with fresh gasoline and use up in your lawnmower.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

! Dumping gasoline and/or oil into sewers, storm drains or any body of water is illegal in Oregon.

Alternatives

- Do not allow gasoline to become contaminated or old. Buy what you need and use it up.
- For cleaning grease or dirty oil from car parts, use a non-toxic, citrus-based degreaser.
- Use a push or electric lawn mower and electric power tools.
- Limit your use of gasoline by choosing a fuel-efficient vehicle. Keep the engine well-tuned, tires properly inflated and pollution control equipment functioning properly.

- Carpool, use mass transit, bicycle or walk more. Cars and trucks are the number one source of air pollution in Oregon.

Hair products (permanent wave solutions and hair coloring)

Common hazardous ingredients
amines, ammonium lauryl sulfate, ammonium thioglycolate, diethylenetriamine, phenacetin, vinyl acetate-some hair colorings contain cadmium, cobalt, copper, lead

Potential hazards
Irritant to the skin, eyes and lungs; chronic irritation may occur if ammonia-containing products are used over long periods of time. Air pollutant.

Use and storage
Follow label directions. Use in a well-ventilated area. Avoid contact with eyes. Keep container tightly closed when not in use and store in a secure area away from children.

Disposal
Best: Use up or give away. Rinse container and dispose of in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Third best: If you are connected to a city sewer system, flush small amounts down the drain (toilet is preferable) with lots of water. Do NOT use this method if you are on a septic system.

Alternative
- Use ammonia-free hair styling products.

Handcleaners, mechanic/painter

Common hazardous ingredients
acrylic acid, butylated hydroxytoluene, ethanolamines, ethoxylated alcohols, methionine, mineral spirits, naphtha, p-chloro-m-xylenol, petroleum distillates, propylene glycol

Potential hazards
Irritant to skin, flammable, toxic, air pollutants.

Use and storage
Use according to label instructions. Avoid breathing vapors by using in a well-ventilated area. Wash hands with soap and warm water after each application. Keep the container tightly closed when not in use and store in a secure area that is locked or out of reach of children and pets.

Disposal
Best: Use up or give away to a service station or technical college. Dispose of empty container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
- Keep your hands clean by wearing nitrile or other gloves suited to the job.
- Massage hands with a few drops of baby oil or margarine. Wipe dry and wash with soap and water.
- Try a nontoxic lanolin and glycerin-based hand cleaner.
- Coat hands with hand lotion before doing auto work. Wash hands afterward.

Kerosene/diesel fuel

Common hazardous ingredients
aliphatic hydrocarbons, aromatic hydrocarbons (benzene, naphthalene, toluene, xylene)

Potential hazards
Flammable, explosive, highly toxic, irritant to skin, air pollutant. Benzene is a known human carcinogen.

Use and storage
See "Gasoline" listing.

Disposal
Best: Use up or give away.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

! Caution: If using a kerosene heater, provide adequate ventilation to remove combustion pollutants, such as carbon monoxide and sulfur dioxide. Use only low-sulfur 1-K grade fuel in kerosene space heaters. NEVER use home heating oil or other fuels.

Lubricating oils

Common hazardous ingredients
aliphatic and aromatic hydrocarbons (benzene, naphthalene, toluene, xylene)

Potential hazards
Flammable, toxic, air pollutant. Benzene is a known human carcinogen.

Use and storage
Minimize skin contact by wearing nitrile gloves. Store in a secure area that is locked or out of reach of children and pets.

Disposal
Best: Use up or give away. Dispose of empty container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
- Use plain castor oil or mineral oil on hinges, doorknobs and latches.
- For locks, use dry powdered graphite.

Medical waste/sharps

Potential hazards
The medical waste items most often disposed of by households in Oregon are disposable hypodermic syringes and needles (called sharps) used for home medications in the treatment of diabetes and allergies. Other types of medical wastes include cultures and stocks, biological waste and pathological waste. Improper disposal of sharps can injure garbage workers or, if contaminated with infectious disease organisms, transmit communicable diseases.

Disposal
Infectious wastes must, by Oregon law, be treated and (in the case of household sharps) be properly contained and kept separate from household garbage. Sharps containers must be leak proof, rigid, puncture-resistant and red in color and taped closed or tightly lidded to prevent loss of the contents. Contact your garbage hauler, local government solid waste department or public health department to obtain proper disposal containers and service information for packaging and collection in your area. In Clackamas, Multnomah and Washington counties, Metro has a sharps container exchange program. Call (503) 234-3000 for more information. For further information about proper identification, treatment and disposal of infectious and medical wastes, visit DEQ's infectious waste web page at www.deq.state.or.us/wmc/solwaste/infect.html.

Medicines, unwanted/ expired

Potential hazards
Many medicines are toxic and may be harmful or fatal if ingested, especially by children or the elderly. Children are especially susceptible to chemical poisoning because of their lower body weights and still-developing nervous systems.

Use and storage
Read labels on all products carefully before using. Store all medicines with child-resistant caps in place. Keep them in a secure place. Keep all medicines, over-the-counter or prescription, in the original container with the name of the drug and recommended dose on the label.

Disposal
Best: If connected to a city sewer system, flush small quantities of unwanted or outdated medicines down a toilet (EXCEPT DRUGS FOR THE TREATMENT OF CANCER AND SHAMPOOS FOR HEAD LICE). Rinse empty containers and dispose of in the garbage. Take large quantities of medicines, drugs for the treatment of cancer, and shampoo for head lice to a household hazardous waste collection site. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000 for instructions. Elsewhere in Oregon, call 1-800-732-9253.

Second best: If on a septic system, place unwanted medicines in a heavy-duty plastic bag, tape the top securely and put in your outdoor garbage can. DO NOT dispose of in an indoor garbage container where children or pets might have access to them.

Further precautions
- **Post the Poison Control Center phone number, 1-800-222-1222, next to your phone.** You can obtain free poison prevention materials and Mr. Yuk stickers from the Poison Center.
- In cases of suspected poisoning, do not induce vomiting unless the Poison Center tells you to do so. Some substances can cause severe damage when vomited.

! Medicines are the most common substance involved in childhood poisonings.

Mercury-containing products
(see also fluorescent lights, thermometers, thermostats)

Some common household items that contain mercury are silent wall switches, (make no sound when switched is turned on or off) barometers and blood pressure gauges that have a mercury-filled tube.

Potential hazards
Mercury vapors are harmful if inhaled. Women who are pregnant and children are at most risk. Mercury products can pollute the air, soil and water when incinerated or landfilled.

Disposal
Best: Take your mercury product to a household hazardous waste facility or to a household hazardous waste collection event. In Clackamas, Multnomah or Washington counties, call Metro Recycling Information (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9235.

In the event of breakage:

- Evacuate the room, turn off the air conditioning/ heating system and ventilate the area with fans and windows. This helps volatilize the mercury and allow it to escape outside, where it is less dangerous.
- Clean the area. Avoid vacuuming or sweeping, if possible, this will spread the mercury around. DO NOT use cleaning products, they may react with the mercury.
- Use gloves to protect hands and remove jewelry – mercury may attach to gold or silver.
- Try to wipe or scrape up mercury and place all cleaning items, gloves or other contaminated items into a sealed contained. Label the container "contains mercury."
- Take the sealed container to a household collection facility or event. If this option is not available in your community, you can dispose the container in your regular garbage.

Concerned about a mercury exposure? Contact:
Oregon Poison Control Center, (800) 222-1222.

Mercury-containing fish advisories:
Oregon Health Division, (503) 731-4025.

Alternatives
- Silent wall switches: use standard wall switches.
- Blood pressure monitors: use an aneroid (dial gauge), digital or automatic blood pressure gauge.
- Barometers: use an aneroid (spring balance) barometer.

Moss killer

Common hazardous ingredients
ammonium sulfate, copper sulfate, ferric and ferrous sulfates, sodium pentachlorophenate, zinc chloride, zinc sulfate

Potential hazards
Corrosive; toxic to humans, pets, other plants, animals and fish.

Use and storage
Carefully read and use according to label instructions. Use a sprinkler can or tank sprayer, not equipment or techniques that produce an ultra-fine mist that can drift off target. Store in a secure area.

Disposal
Best: Use up or give away. Dispose of empty container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
Structural demossing

- Zinc-galvanized or copper flashings and ridges are effective for moss control 10 to 15 feet down from the ridge on most roofs.
- Normal corrosion from bare copper wires stretched horizontally every 10 feet will provide some moss control.
- Biodegradable, soap-based moss killers are available. Be aware that soaps are toxic to fish and other aquatic organisms. Follow directions carefully.

Lawn demossing

- Generally, moss is caused by too much shade for the grass species, poor soil drainage, and soil compaction coupled with poor watering and fertilizing practices. Unless the basic problems are corrected, any attempt at control will be incomplete and temporary. If environmental conditions are not favorable for grass, consider leaving the moss or planting other appropriate ground covers as an alternative.
- Neutralizing acidic lawn soil with lime will help prevent moss growth.
- Infrequent and deep watering encourages deeper grass rooting and will help dry out moss.
- Thatch your lawn and rake out the moss.

Mothballs/moth crystals

Common hazardous ingredients
naphthalene, p-dichlorobenzene

Potential hazards
Poisonous when eaten. May look like candy to a child. Poisonings have also been reported after dressing infants in clothing that had been stored with naphthalene-containing mothballs. Chemically sensitive individuals are also at risk of this reaction. Irritant to nose, throat and lungs when inhaled. Potential liver and kidney damage from long-term exposure to vapors. P-dichlorobenzene is a suspected human carcinogen.

Use and storage
Avoid these products. If you do choose to use mothballs, use them sparingly, according to label instructions, in a seldom used room. NEVER use mothballs or flakes as air fresheners. Store any remaining mothballs/moth crystals in an airtight plastic bag. Store in a locked cabinet or out of reach of children.

Disposal
Best: Use up in a seldom-used room or give away.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000 for instructions. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
- Kill moth eggs by running garments through a warm clothes dryer.
- Periodically shake out woolens. Discard or donate woolens, leather and feather products that are no longer used to avoid contaminating newer materials.
- Clean woolens prior to storage. They should be hand washed using a mild soap whenever possible. Dry clean as a last resort. Dry cleaning is a significant air polluter. If you decide to dry clean, shop around for a dry cleaner that attempts to control emissions and reduce the use of toxic solvents.
- Store seasonal woolens in very tight containers when not in use.
- Vacuum rugs, carpets and upholstered furniture regularly.
- If you suspect an infestation, place the item in a plastic bag in the freezer for at least 48 hours. Return the item to room temperature and repeat freezing. Leave the item in a tightly sealed plastic bag or container to prevent reinfestation.

The alternatives listed above will also prevent damage from carpet beetles, which are often more of a pest in Oregon than clothes moths. Carpet beetles are not controlled with mothballs or moth crystals.

Motor oil/oil filters

Common hazardous ingredients
petroleum hydrocarbons
Used motor oil can contain polynuclear aromatic hydrocarbons, chromium, lead and other metals.

Potential hazards
Flammable, toxic. Can be absorbed through skin contact. Long-term (chronic) health effects from toxic heavy metals such as lead. Environmental pollution of surface or groundwater when disposed of by pouring down a storm drain, into a drainage ditch or on the ground.

Use and storage
Minimize skin contact with motor oil by wearing nitrile gloves when handling. Drain used crankcase oil into a metal or plastic catch pan. Avoid using absorbent-containing "easy-change" boxes, since oil cannot be recycled once in these boxes. Remove old oil filter, turn upside down and drain overnight into oil catch pan. Do not mix carburetor cleaner, solvents, antifreeze, brake fluid, degreaser or gasoline with used motor oil. Store away from children and sources of flames.

Disposal
Used oil: In Clackamas, Multnomah and Washington counties, set out used oil for curbside collection in a well-rinsed, transparent, non-breakable container with a screw-on lid (milk jugs work well). Elsewhere in Oregon, call your garbage hauler, recycling center, local government solid waste department or your regional DEQ office (see page 39) to determine the most convenient way to recycle oil in your area.

Oil filters: Contact your local scrap metal recycler to see who will accept your well-drained oil filter or take to a household hazardous waste collection facility or event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253 to find out if there is a hazardous waste collection event scheduled in your community.

! NEVER pour used oil on the ground, in a ditch, down a storm drain or down an inside drain.

Alternatives
- Purchase re-refined oil if it is available. This will help improve the market for used oil, advance oil recycling efforts, help decrease reliance on imported oil and slow the rate of resource depletion.
- Have your oil changed at a service station that has its oil recycled.

! The National Oil Recyclers Association estimates that 260 million gallons of oil are improperly disposed of each year in the U.S. – the equivalent of 26 Exxon Valdez oil spills.

Oven cleaners

Common hazardous ingredients
ethers, ethylene glycol, lye (sodium and potassium hydroxide), methylene chloride, petroleum distillates, pine oil

Potential hazards
Corrosive to skin, eyes and internal organs. Methylene chloride is a suspected human carcinogen.

Use and storage
Avoid aerosol oven cleaners. Adequate protection from vapors is difficult. Follow all label directions. Wear an apron, heavy rubber or nitrile gloves and chemical splash goggles. A respirator is recommended if the product contains sodium or potassium hydroxide and is in an aerosol can. Use with correct cartridge and filter. Use kitchen exhaust fan and open several windows to provide adequate fresh air. When not in use, keep in a secure place.

Disposal
Best: Use up or give away. Dispose of empty, nonaerosol containers in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
- Put a sheet of aluminum foil on the oven floor away from the heating element. When baking a pie or other dish on the upper rack, place a cookie sheet below it on the lower rack to catch drips.
- Clean up spills as soon as the oven cools. They are much harder to remove after they have baked on.
- Use a nonchlorinated scouring powder, a pumice stick or a copper or steel wool scrubbing pad. A blunt knife is useful for prying up large crusty materials.
- Use a self-cleaning oven.

Paint, oil-based/stain/spray

Common hazardous ingredients
alkyl resin, kerosene, lead, lithopone, mercury, methylene choride, methyl ethyl ketone, mineral spirits, toluene, trichoroethane, xylene

Potential hazards
Flammable; toxic; irritant to skin, eyes and lungs. Air pollutant. Toxic fumes can accumulate in closed spaces and areas with poor ventilation. Methylene chloride is a suspected human carcinogen.

Use and storage
Determine the amount of paint that you need for the job and buy only that amount. Avoid using these products while pregnant. Work in a well-ventilated area away from flames or sparks. Do not smoke while painting. Wear nitrile gloves. Store in a secure area away from children, pets or heat sources. Avoid using spray paint or spray applicator whenever possible.

Disposal
Best: Use up completely if the product does not contain lead (manufactured after 1978). Dispose of empty container, with lid removed, in the garbage.

Second best: Give leftover, non-lead paint to someone who can use it, such as a theater group, signmaker, commercial painter or nonprofit group.

Third best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
- Choose latex water-based paints that have no or low solvent content. Latex paints contain fewer flammable and toxic solvents than oil-based products. (See “Paint, water-based”).
- Apply paints by brush or roller rather than by spraying whenever possible.

The following key words on paint labels can help you determine if paints are oil-based or water-based:

- **Water-based:** “clean up with soap and water,” “latex”.
- **Oil-based:** “clean up with mineral spirits,” “contains petroleum distillates,” “combustible: keep away from heat and flame,” “harmful or fatal if swallowed.”

Paint, water-based

Common hazardous ingredients
acrylic resins, ethylene glycol, lead, mercury

Potential hazards
Indoor latex is less toxic than oil-based paint, but traditional brands often contain enough solvent to be air pollutants. Exterior latex, sold as anti-fungal or

"mildew resistant," with mercury pesticide is highly toxic if ingested. Any latex may contain mercury if manufactured before 1991 or lead if manufactured before 1979.

Use and storage
Keep the container tightly closed when not in use and store in a secure area.

Disposal
Best: Use up or give away to a theater or nonprofit group. Air dry empty containers in a secure, well-ventilated area and dispose of in the garbage with the lids off.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000 for instructions. Elsewhere in Oregon, call 1-800-732-9253.

Third best: Air dry unwanted paint in the can if it does not contain lead. Leave lid off until the paint dries out and dispose of in the garbage. Alternately, add kitty litter, sawdust, or commercially available drying agent until all liquid is absorbed and discard solidified paint in the garbage.

Alternatives
- Look for paint that is labeled with words such as "low solvent," "low VOC" or "low odor." These paints have little or no ethylene glycol or other volatile organic compounds (VOCs) which are flammable, toxic solvents that cause air pollution.
- Use whitewash (a combination of hydrated lime, water and salt that lacks heavy metal pigments, alkyd resins and other chemicals common in paint) for fences, barns, basements and outbuildings. Use a dust mask when mixing.
- Buy Metro's recycled latex paint call (503) 234-3000 for details or visit www.metro-region.org/paint. Outside of the Portland metro area, contact the Oregon DEQ to find out about other sources of recycled latex paint at 1-800-452-4011.

In Oregon, about 20 percent of all the household hazardous waste products in landfills are paint products.
– Oregon Department of Environmental Quality
2000 Waste Composition Study

Paint strippers/paint scrapings

Common hazardous ingredients
Solvent-based – acetone, benzene, carbon tetrachloride, methanol, methylene chloride, phenols, toluene. Water-based – aliphatic petroleum distillates, dibasic acid esters, n-methyl-2-pyrrolidone (NMP), propanoic acid. Alkali-based – lye (sodium hydroxide)

Potential hazards
Solvent-based products are flammable and highly toxic; vapors are easily inhaled or liquid absorbed through the skin on contact; alkali-based products are corrosive. Air pollutant. Benzene, carbontetrachloride and methylene chloride are known or suspected human carcinogens.

Use and storage
Any object painted before 1978 should be tested for lead before stripping. Simple test kits are available at many local hardware stores for about $10 to $30. Paint chips can also be sent to a laboratory for testing at a cost of about $20 a chip. **For more information about testing for lead paint and lead paint removal, call the Oregon Health Division at (503) 731-4012.**

Avoid using solvent-based strippers, especially if you are pregnant. Carefully read the label instructions before starting the job. Work in a well-ventilated area that is outdoors in the shade if possible. Wear chemical splash goggles, a respirator with a correct cartridge and filter and heavy rubber or nitrile gloves. Keep container tightly closed when not in use. Store in a secure place away from children and sources of heat or flames.

Disposal
Best: Use up or give away. Wrap scrapings in several layers of newspaper and place in a heavy-duty plastic bag. Dispose of bag and container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
- If the paint does NOT contain lead, use a scraper, rasp, abrasive block, heat gun or sandpaper to remove paint without chemicals. Wear a respirator to avoid breathing paint dust.
- Water and alkali-based paint strippers are less toxic than solvent-based types. They can be identified by a **caution** rather than a **danger** signal word on the label.

Methylene chloride is suspected of causing cancer in humans and also aggravates heart conditions. It is commonly found in paint strippers and many other household products. The Consumer Product Safety Commission now requires that products containing this chemical carry a statement of risk on the label. However, older products will not contain such warnings. Products likely to contain methylene chloride include: adhesives and glues, aerosols, Christmas bubble lights, cleaning fluids, degreasers, glass

frosting and artificial snow, paint strippers and removers, pesticides, septic tank cleaners, solvents, spray paints and primers, spray shoe polish and water repellents, stain removers, wood stains and varnishes. Read product labels and avoid using products containing methylene chloride around children and pets, if you are pregnant or if you have a heart condition.

Paint thinners

Common hazardous ingredients
acetone, methanol, naphthalene, toluene, turpentine, xylene

Potential hazards
Flammable; highly toxic; vapors easily inhaled; absorbed through skin contact. Air pollutant.

Use and storage
Avoid using if you are pregnant. Use in a well-ventilated area and wear heavy rubber or nitrile gloves to avoid skin contact. Keep container tightly closed when not in use. Store in a secure area that is out of reach of children and away from sources of heat or flames.

Disposal
Best: Let paint particles settle out, then filter off the clear thinner and reuse. Let the sludge dry out in a secure, well-ventilated area (preferably outdoors). Wrap in newspaper and dispose of in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternative
- Avoid the use of paint thinners by choosing water-based paints that are “low solvent, “low VOC,” or “low odor.”

Pesticides (insect, rodent and weed killers and fungicides)

Common hazardous ingredients
More than 1,400 active pesticide ingredients are used in an excess of 45,000 pesticide formulations. Because of the extremely hazardous nature of some pesticides, the Environmental Protection Agency has canceled, suspended or restricted their use. The following is a partial list of pesticides banned from household use: aldrin, aresenates, chlordane, creosote, cyanides, DBCP, DDT, dieldrin, heptachlor, kepone, lindane, mirex, pentachlorophenol (PCP), silvex, sodium arsenite, 2, 4, 5-T and toxaphene. DO NOT USE THESE PRODUCTS!

Potential hazards
Immediate (acute) or long-term (chronic) poisoning from repeated exposure. Exposure can occur through skin absorption, inhalation, or swallowing. Harmful to eyes and skin. Can be toxic to pets, beneficial insects, birds, animals and fish, even in small amounts. Air pollutant. Arsenic is the only known human carcinogen that is currently approved for use as a pesticide.

Use
- Avoid using pesticides when alternatives are available, especially if you are pregnant.
- If you decide to use pesticides, read labels to select the appropriate pesticide for your problem.
- Do not buy more than you can use in one or two gardening seasons.
- Do not mix pesticides unless directed to do so by label directions and use the exact amount specified.
- Avoid wearing soft contact lenses, which can absorb pesticides.
- Keep children and pets away from all areas where pesticides have been applied.
- When applying more than a squirt of pesticide, wear clothing that covers all exposed skin, chemical splash goggles, a respirator with the correct cartridge and filter, and heavy rubber or nitrile gloves.
- After using a pesticide, wash your hands and exposed skin areas before eating or smoking.
- Wash pesticide-contaminated clothing separately from other clothing.
- When a room is treated with pesticides, leave the room for as long as recommended by the applicator or label. Upon returning, open all windows and allow the room to air out. Wash contaminated surfaces.

Storage
Always store unused pesticides in their original containers. Store inside a sealed plastic container or a metal container with a lid. Clearly label the container. Do not store near food. Store in a secure area away from children and pets. Do not store metal containers in wet areas or other locations that will encourage the metal to rust.

Disposal

Best: If the pesticide is not expired, banned or restricted (call your OSU County Extension Office if you are uncertain) use up according to label instruction or give to a responsible person who will. Empty pesticide containers made of plastic or glass or with plastic or foil liners should be triple-rinsed with water. Apply rinse water according to label directions as regular strength pesticide. Wrap empty container in newspaper and dispose in the garbage.

Second best or best if a banned or restricted use pesticide: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

! Pesticides should never be burned, buried, mixed together, poured on the ground, dumped in the water, poured down the drain or put in the garbage.

Alternatives

Reducing home pesticide use is usually not quite as simple as substituting one product for another, but it is easier than you may think. Methods vary depending upon the pest encountered, but the general steps listed below show how careful pest identification and monitoring, prevention and planning, and use of nonchemical controls can often eliminate the need for toxic pesticides. More specific alternatives follow for some of the most common home pests. These suggestions only scratch the surface of a complex subject. You may wish to seek more in-depth information from your local OSU County Extension Office, Metro Recycling Information at (503) 234-3000 or Oregon Tilth at (503) 691-9810 or (503) 620-2829.

- Identify pests carefully. Most insects are either harmless or beneficial.
- Learn all you can about the pests you have. Proper treatment requires knowledge of the pest and the control method.
- Tolerate a few insects; not all can or should be eradicated.
- Remove habitat that encourages pests.
- Encourage ecological diversity in the garden by planting a wide variety of plants.
- Encourage beneficial insects in the lawn and garden by growing small flowered plants, especially those that bloom over a long season, and reducing the use of pesticides.
- Grow plants that are resistant to insects and diseases in your area.
- Use barriers to keep pests out of places where you don't want them.
- Use traps to catch pests without chemicals.
- Remove pests by hand (including clippers, pruners, water spray, weed pullers or vacuum cleaner as appropriate).
- Purchase and release beneficial insects, such as lacewings and parasitic wasps when appropriate.
- Rotate annual plantings of flowers and vegetables so that insect populations do not build up within a planting.
- Keep weeds in check through hand pulling and mulching.
- If you choose to use a chemical, use the least toxic one possible and always make spot rather than broadcast applications. Use insecticidal soaps, horticultural oils, microbial insecticides, beneficial nematodes and desiccating dusts in place of synthetic pesticides as appropriate to a specific problem. Use all of these products according to directions.

! Want more information and publications on reducing pesticide use? In the Portland area (Clackamas, Multnomah and Washington counties), call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call the Oregon Department of Environmental Quality at (503) 229-5913 or toll-free at 1-800-452-4011. Ask for "Natural Gardening: A guide to alternatives to pesticides" or download a pdf copy at www.metro-region.org/pdf/altpest.pdf.

For ants (nonstructural pests)

- Clean up all sources of food and water. Store food in ant-proof containers.
- Block points of entry. Use commercial sticky barriers.
- Remove ants in the house by vacuuming or cleaning up with soapy water.
- Sprinkle boric acid-based insecticide or other approved desiccating dusts on trails and where ants are found in nooks and crannies. Do not use where children or pets may have access.
- When all else fails, make an effort to locate nests. If ant nest is outside, destroy by pouring boiling water on it. If nest is inside, spot treat using least-toxic techniques. Least-toxic chemicals are boric acid, pyrethrum and silica gel.

For carpenter ants and termites

- Repair any rotten or weather-damaged wood and be sure that attic and crawl space ventilation is adequate. Inspect, clean and repair gutters and downspouts. Wooden parts of house should not contact soil. Also check that automatic sprinklers are correctly positioned (i.e., not watering the house).
- Remove potential sources of ant nests and access close to house. Remove decaying stumps and wood debris. Do not pile firewood against house. Prune back trees and shrubs so they do not touch structure. Check or remove wooden planters and decorative wood that is in contact with the ground.

- Check firewood carefully for insects before bringing it inside.
- Find nests and remove or destroy them with least toxic chemicals such as boric acid, pyrethrum or silica gel.

For caterpillar pests (loopers, leafrollers and cutworms)

- Accept low levels of damage.
- Encourage natural predators. Build birdhouses, set up birdbaths, plant millet and other seed crops to attract swallows and other allies. Encourage beneficial insects.
- Remove from plants by hand, by hosing off or by pruning out affected areas (tent caterpillars). This is most effective at night when caterpillars are in the nest.
- Apply B.t. (Bacillus thuringiensis, a commercially available bacterium) to plants when caterpillars are feeding. Be careful, B.t. is toxic to all types of caterpillars, including those which produce beautiful butterflies. Use according to directions.
- Spray leaves with nondetergent soapy water. This can also be effective on mites and other soft-bodied insects if done correctly. Low-toxicity insecticidal soaps are commercially available.

For cockroaches

- Cleanliness is essential. Clean up food particles and avoid leaving your pet's food out for extended periods. Remove newspapers, garbage bags and other clutter that roaches hide under.
- Check over appliances before you bring them into your home. You could bring in an infestation!
- Plug or caulk cracks and holes.
- Remove sources of water. Fix leaky faucets and sink plumbing. Replace any damp wood.
- Roach traps and "hotels" are safe. Roach traps should be placed against walls for maximum effectiveness.
- Silica dust sprinkled in cracks kills roaches by desiccation.
- Sprinkle a boric acid product under appliances and in nooks and crannies in affected areas. Boric acid is moderately toxic. Place it only where it is inaccessible to children or pets.

For fleas

- If possible, establish one sleeping area for your pet.
- Vacuum at least weekly all areas where pets have access and dispose of vacuum bag or place it in the freezer for at least 24 hours immediately after vacuuming. Wash bedding frequently.
- Restrict pet access from bedrooms, attics, basements and hard-to-clean areas, like carpeted rooms.
- Bathe pets with shampoo or use flea comb regularly (outdoors).
- Keep a low-toxic herbal flea collar on your pet.
- Growth regulators prevent eggs and larvae from developing. They are nearly non-toxic to mammals but hazardous to other insects and marine life, so apply carefully. Formulations are readily available at pet stores.
- Use flea soap or a citrus extract product (without other insecticides) in conjunction with the above steps to control fleas in the house if problem becomes severe.

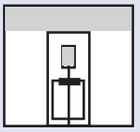
For insects on plants

- Use resistant plant varieties wherever possible. Ask your local OSU County Extension Office for advice.
- Wash insects from outdoor plants with a strong hosing, preferably in the morning.
- Buy a soap-based insecticide. Spray infested leaves with soapy spray, then rinse off with plain water shortly after the soap solution has dried. Caution: Some plants can be damaged by soap solutions. Test on a few leaves before treating large areas.
- Use sticky traps, pheromone traps, horticultural oils, microbial insecticides and beneficial nematodes when appropriate. Ask your local OSU County Extension Office for advice.
- Use floating row covers such as reemay or agronet as a barrier against leaf miners, carrot rust fly, cabbage maggot and other pests that lay eggs on or near plant leaves.
- Time plantings of annuals to avoid periods of heavy infestation.
- Spray leaves with nondetergent soapy water. This can also be effective on mites and other soft-bodied insects if done correctly. Low-toxicity insecticidal soaps are commercially available.

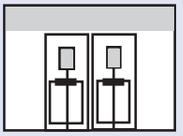
For mice and rats

- Sanitation is crucial. Litter encourages rodents. Use garbage cans with tight-fitting lids and be sure there are no holes in the base. Clean up food scraps. Store food, including pet food, in metal containers that rodents cannot readily gnaw through.
- Don't leave pet food outside and keep spilled birdseed cleaned up underneath bird feeders.
- Compost fruit and vegetable scraps in a worm bin. If you place them in your yard debris compost, be sure to bury them in the middle of the pile. Do not compost meat, dairy or grain products. Keep compost in hard plastic bins and place hardware cloth underneath the been to keep rodents from digging under the bin to get into the compost pile.

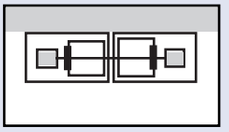
- Seal possible points of entry before mice and rats seek shelter from cold autumn weather (a mouse can enter through a 1/2 inch space).
- Glue boards or sticky traps are gaining popularity, especially where toxicants are not desirable. They are most effective in dry locations which are free of dirt and dust.
- Use traps baited with a mixture of peanut butter, oatmeal and honey, or tie a cottonball to the trigger – it won't rot and the mice like them for their nests.



Single trap set with trigger next to wall



The double set increases your success



Double set placed parallel to the wall with triggers to outside

Mice and rats tend to have established "runways" along wall edges. For maximum trap effectiveness, place the bait-end of the trap about 1/4 inch away from the wall. To reduce chances of the rodent escaping the trap and becoming trap-shy, allow the animal to take the bait at least once prior to setting the trigger.

For moles and gophers

- Moles are voracious insect eaters that daily consume their weight in cutworms, wireworms, sowbugs, other garden pests and earthworms. Unlike gophers, who eat the roots of your garden crops and can kill young trees, moles are beneficial for the most part. Do you really want to kill them?
- For gopher control, use Macabee-type spring traps or boxtraps, or for larger gophers, a cinch trap. These are available through most hardware and farm supply stores. Set in burrow runways.
- OSU Extension Service Circular EC-987 discusses mole control and EC-1115 describes pocket gopher control. These publications are available from your local OSU County Extension Office for a small fee.

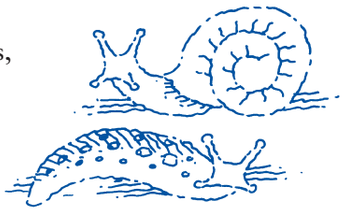
"When you kill a beneficial insect, you inherit its work."

— Carl Huffaker

For mosquitoes

- Clean up or remove potential breeding sites and refuse like tires, cans, crumpled up plastic mulch and anything that can hold water for larvae.
- Fix leaky plumbing that may be creating pools in crawl spaces or puddles near your home.
- Use well-fitting screens on windows and doors to prevent mosquitoes from entering your home.
- Bacterial formulations such as Bactimos are selectively effective against certain mosquito species.
- Citronella-based insect repellents are a good choice for pets and those allergic to DEET. It is a natural plant extract but it is not benign. It may cause allergic reactions and is harmful if ingested.
- For infants and small children, use mosquito netting.

For slugs and snails



- Garter snakes, some species of ground beetles, salamanders and ducks feed on snails and slugs.
- Purchase some cheap beer. Sink open containers of it into the soil around the garden. Slugs will be drawn to the beer, crawl in and drown. Commercial traps are also available which can be baited with beer. Replace beer frequently.
- If you garden in raised beds, tack copper strips to the outer frame as a barrier. This is the most effective barrier currently known. Be sure to remove slugs already inside the barrier.
- Clean up around the garden to remove hiding places and food sources. Cut back grass and weeds that slugs could use to get around barriers. Remove bricks, boards or pots slugs can hide under or use these hiding places as traps by scrapping off and disposing of the slugs and snails on a daily basis.
- Use tweezers, wooden chopsticks or a skewering device to "hand pick" slugs at night or when cool or wet. Pay kids a "slug bounty" to pick them up. Drown them in a bucket of soapy water, then bury or compost them.
- Instead of metaldehyde slug bait (toxic to mammals), try sprinkling sawdust, diatomaceous earth (available at garden or landscaping shops), ashes or lime around affected areas. These materials also serve as soil amendments. If kept dry, this makes an irritating, drying surface that slugs find unattractive. They will need to be replaced after a rain.
- Slug bait made from metaldehyde is highly toxic to small animals such as pets. If you use it, put it into pet or child-proof traps. Iron phosphate is an ingredient in newer slug bait products such as Worryfree and Escargo! brands. It is much safer to pets and wildlife and studies show it is 85 to 100 percent effective at controlling two common types of garden slugs.

For weeds

- Know your weeds! Most annual and biennial weeds can easily be pulled by hand. Hire neighborhood youngsters to help. Pull perennial weeds within 4-6 weeks of sprouting before persistent parts form.
- Dandelions can be removed with a tool specifically designed to pull out the entire root. Perennial weeds such as dandelions, bindweed (perennial morning glory), Canada thistle, horsetail rush (Equisetum) and buttercup will come back unless the whole root structure is removed. Sometimes frequent cutting is required every two weeks for deep-rooted perennial weeds.
- Perennial weeds in the lawn can be weakened by repeated mowing. Growing a healthy lawn helps out-compete weeds.
- Cover bare areas with ground cover plants or mulches. Some good decorative mulches include sawdust, bark and nutshells. In the garden, use straw and partially composted garden waste.
- Commercial weed mats are available for placing under gravel or bark. Be sure to get the type that water can penetrate, rather than using plain black plastic. Or use 10-15 overlapping layers of newspaper.
- Direct water and fertilizer to desirable plants and away from weeds.
- Boiling water is a good spot treatment for weeds that grow in sidewalks and driveways.

For yellow jackets

- Yellow jackets do not use the same nest for more than one season. If the nest is not in your way, consider leaving it alone. Yellow jackets are beneficial insects and should not be destroyed.
- Keep garbage cans, picnic tables and other outdoor items clean. Keep lids on trash cans.
- Minimize your attractiveness to yellow jackets by avoiding bright colors and strong perfumes or colognes when in places where yellow jackets are plentiful.
- At picnics, use traps baited with salmon or liver-flavored cat food to lure wasps away from the table.
- If nests in structures, trees or the ground need to be removed, hire a professional who can do the job safely. Ask that they use pyrethrins rather than other types of chemicals. Some types of nests that hang from trees or roof overhangs can be removed by freezing rather than poisoning the insects if the person doing the job is knowledgeable and has the right equipment. Some companies will remove yellow jacket and wasp nests for free or a nominal fee. These companies then sell the wasps to laboratories, which use the wasp venom to produce antidotes for those allergic to bee venom.

! Losing the battle with bugs? The OSU Extension Service has offices in every county seat in Oregon. For some of the best information available, check your county government listings and give them a call.

Photographic chemicals

Common hazardous ingredients

ammonium hydroxide, boric acid, carbon tetrachloride, chromate, formaldehyde, hydrochloric acid, methylene chloride, mercury, oxalate, silver, sodium hydroxide, sodium thiocyanate, trichloroethane

Potential hazards

Corrosive; acids can burn and blind; can cause skin, eye and lung irritation; toxic. Air and water pollutant. Carbon tetrachloride and methylene chloride are suspected human carcinogens.

Use and storage

Use according to label instructions. Cover all exposed skin. Wear chemical splash goggles and heavy rubber gloves. A canopy-type exhaust hood should be sufficient for photography development done occasionally in the home. A bathroom-type exhaust fan is not adequate. **When mixing chemical solutions, always add acid to water to avoid a possible reaction.** Store in clearly marked, nonmetal, unbreakable containers. Keep out of reach of children and pets.

Disposal

Best: Use up your unmixed chemicals or give to someone who will, such as a school, photographic materials supplier or photo club. If you have color photography chemicals and solutions, contact the manufacturer for disposal instructions.

Second best: If your home is connected to a city sewer system, small amounts of well mixed and diluted black-and-white photography solution can be flushed down the drain (toilet is preferable) with plenty of water.

Third best: If you are on a septic system or have large amounts of chemicals, take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

! If you generate substantial amounts of photographic solution or generate it on a regular basis, equipment is commercially available for reclaiming the silver from the chemicals safely.

Polishes, shoe

Common hazardous ingredients
methylene chloride, mineral spirits, nitrobenzene, silicones, trichloroethylene

Potential hazards
Flammable; toxic; absorbed through skin contact and vapor inhalation. Air pollutants. Methylene chloride is a suspected human carcinogen.

Use and storage
Use according to label instructions in a well-ventilated area. Wear rubber gloves. Keep container tightly closed when not in use. Keep contaminated rags and brushes in a sealed container as well. Store all materials out of reach of children and away from sources of flames.

Disposal
Best: Use up or give away. Dispose of empty nonaerosol container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
- Use wipe-on rather than spray polishes. They have fewer solvents and are less likely to be inhaled.
- Apply beeswax-based products, olive oil or cold-pressed nut oil to leather and buff with a chamois cloth to shine.
- Work a dab of petroleum jelly into patent leather to give it a glistening shine and prevent cracking in the winter.

Polishes/cleaners/waxes, automotive

Common hazardous ingredients
acetone, linear alkylbenzene sulfonate (or other surfactants), petroleum naphthas, sodium metasilicate

Potential hazards
Flammable; toxic; irritant to skin, eyes and upper respiratory tract. Air pollutant.

Use and storage
Avoid aerosol products. Use according to label instructions. Wear heavy rubber gloves. Keep container lid tightly closed when not in use and store in a locked cabinet or out of reach of children and pets.

Disposal
Best: Use up or give away. Dispose of empty nonaerosol container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
For car wash
- Use 2 tablespoons of mild dish detergent plus 2 gallons of warm water. Wash car over porous surface such as gravel or grass rather than letting rinse water enter a storm drain. You might also take your car to a car wash that recycles or properly handles waste wash water.

For cleaning chrome
- Use baking soda as a scouring powder on a damp sponge, then rinse well.

For cleaning tires
- Scrub tires with a brush using mild dish detergent and baking soda.

For windows, windshields and headlights
- Mix 1/4 cup of white vinegar or 2 tablespoons of lemon juice in a quart of warm water in a spray bottle. Use as you would any window cleaner.

Polishes/cleaners, metal

Common hazardous ingredients
ammonia, denatured alcohol, naphtha, oxalic acid, petroleum distillates, phenolic derivatives, phosphoric acid, silica, sulfuric acid, thiourea, tripolyphosphate

Potential hazards
Irritant; flammable; toxic; many aluminum cleaners contain hydrofluoric acid, which is extremely corrosive to the skin, can cause blindness and is toxic. Air pollutant.

Use and storage
Avoid using products that contain hydrofluoric acid. Use according to label instructions. Keep containers tightly closed when not in use. Store in a locked cabinet or out of reach of children and pets. Avoid aerosol products whenever possible.

Disposal
Best: Use up or give away. Dispose of empty nonaerosol container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives

For aluminum

- See "Cleaners, general household" listing.

For chrome

- Wipe with a soft cloth dipped in vinegar. Rinse with water and dry.
- To make chrome fixtures shine brightly, wet with water and rub with newspaper.

For copper and brass

- Make a paste of lemon juice and salt. Rub with a soft cloth. Rinse with water and dry.
- To retard tarnish, rub brass with a cloth moistened with olive oil after polishing.
- Cover article to be cleaned with catsup. Let stand for a few minutes, then rinse thoroughly and dry.

For silver

- Rub object gently with toothpaste, using a cotton ball to avoid scratching. Rinse well with water. Caution: Test first on an inconspicuous area.
- Place a sheet of aluminum foil in the bottom of a pan, add enough hot water to cover object to be cleaned, and add 1 or 2 teaspoons of salt or baking soda. Wait a few minutes until silver is shiny again, then remove, rinse and buff dry with a soft cloth. Caution: Do not use this method on silver plate. Test first.

For stainless steel

- Use baking soda, olive oil or mineral oil for shining.
- To clean and polish, moisten cloth with vinegar and wipe clean.

Polishes/waxes, wood furniture and floors

Common hazardous ingredients

ammonia, aromatic solvents (benzene, toluene), phenol, petroleum distillates (also called naphthas or mineral spirits), silicones, synthetic polymers, trichloroethane, turpentine

Potential hazards

Flammable; toxic; irritant. Air pollutant. Benzene is a known human carcinogen.

Use and storage

Avoid aerosol products. Use according to label instructions in a well-ventilated area. Keep the container tightly closed when not in use and store in a secure area out of reach of children and away from sources of heat or flames.

Disposal

Best: Use up or give away. Dispose of empty nonaerosol container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives

- For unvarnished wood, apply mineral oil or vegetable oil sparingly with a soft cloth. Let it soak in, then remove excess and buff hard. Almond or olive oils are especially good to use.
- Use a commercial polish made with mineral oil and citrus oil, rather than one containing toxic petroleum naphtha. Mineral oil polishes will not have "danger" warnings on their labels.
- Rub toothpaste on wood furniture to remove water marks. Polish with a soft cloth.
- For scratches, mix equal parts of lemon juice and salad oil. Rub into scratches with a soft cloth until they disappear.

Pool/spa chemicals

Common hazardous ingredients

bromine, calcium chloride, chlorophenols, chlorine, copper-based algicides, hypochlorites, muriatic acid, polyphosphonate

Potential hazards

Flammable; corrosive; reactive; causes burns on contact with skin or eyes; mixing different chlorine products can cause severe reactions or explosions.

Use and storage

Never mix pool chemicals together. Wear chemical splash goggles and heavy rubber gloves and do not smoke when using. Keep container tightly closed when not in use. Do not stack. Store in a clean, dry, secure and well-ventilated area away from children and pets, flammable materials and sources of sparks.

Disposal

Best: Use up or give to a YMCA, school or a local parks department. Dispose of empty container in the garbage.

Second best: If connected to a city sewer system, flush small amounts down an inside drain (toilet is preferable) with lots of water. Do NOT pour pool chemicals down the drain if you have a septic system.

Third best: If on a septic tank or for large amounts, hold for a household hazardous waste collection or take to a facility. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000 for instructions. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives

- Use ozone or ultraviolet light systems designed to kill bacteria and algae. They reduce the need for pool chemicals.
- Use pool chemicals sparingly.

! WARNING: Do not mix pool chemicals with garbage or other chemicals. Even a small amount mixed with household garbage can cause a deadly reaction. Dispose of these chemicals properly, according to directions.

Rug/carpet cleaners

Common hazardous ingredients

borax, butyl cellusolve (ethylene glycol, monobutyl ether), napthalenepetroleum distillates, trichloroethane, various surfactants

Potential hazards

Toxic; may be flammable; irritant to skin, eyes and mucous membranes. Air pollutant.

Use and storage

Use in a well-ventilated area according to label instructions. Avoid breathing vapors. Wear heavy rubber or nitrile gloves to avoid skin contact. Keep container tightly closed when not in use. Store in a locked cabinet or out of reach of children and pets. Avoid aerosol products whenever possible.

Disposal

Best: Use up or give away. Dispose of empty nonaerosol container in the garbage.

Second best: Hold for a household hazardous waste collection. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000 for instructions. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives

Reduce the need for shampooing

- Remove shoes at the door to avoid tracking in dust and dirt.
- Frequently vacuum with a well-maintained, efficient vacuum. A good vacuum has beater brushes to agitate the fabric.

For general cleaning

- Use a soap-based, nonaerosol rug shampoo. Vacuum when dry.

For spills

- Act fast! Quickly blot up (don't rub) as much as possible. Cotton towels and rags are more absorbent than synthetic fabrics.
- Club soda or clear water are effective on some types of stains, particularly from alcoholic beverages, coffee or tomato-based food.
- Grease stains may require a solvent. Try a citrus-based product.
- See additional tips under "Stain/spot removers" listing.

To neutralize odors

- Sprinkle baking soda liberally over affected area, let sit overnight, then vacuum.

Septic tank cleaners

Common hazardous ingredients

organic solvents such as trichloroethylene, halogenated and aromatic hydrocarbons, lye products or sodium bisulfate

Potential hazards

Tank cleaners containing organic solvents can be persistent and contaminate ground water and should not be used. Products that contain lye or sodium bisulfate are highly caustic and should only be used with gloves, goggles and a respirator with an organic vapor cartridge.

Use and storage

Store out of reach of children and pets in a locked cabinet.

Disposal

Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives

There is no chemical solution other than proper maintenance. Generally, if a tank product is effective it is dangerous and if it is safe, it is not effective.

- Pump your tank every one to two years.
- Consider disconnecting your garbage disposal.
- Don't dispose of grease, fat, hair, cigar and cigarette butts, tissues and towels, sanitary napkins into your system.
- Install low-flow water use products on your sink, toilet and shower.
- Minimize the amount of household cleaners that go down your drains, especially bleach or toilet disinfectants.
- Have your tank professionally cleaned every three to five years.

Smoke detectors, ionizing type

Common hazardous ingredients
Ionizing smoke detectors contain a small amount of radioactive material, Americium-241. Ionizing smoke detectors will have the radioactive symbol on them.

Potential hazards
Low-level radioactivity

Use and storage
Install and maintain according to manufacturer directions.

Disposal
B*est:* Return to the manufacturer (address on base of detector) or retailer.

Second best: Dispose of in the garbage.

Alternative
- Choose a nonionizing, photoelectric-type detector.

! Smoke detectors are important devices for the early detection of fires. All homes should have smoke detectors.

Soot remover/creosote destroyer

Common hazardous ingredients
cupric chloride, kerosene, pine oil, trisodium phosphate

Potential hazards
Irritant.

Use and storage
Use according to label instructions. Avoid breathing vapors. Wear heavy rubber gloves to avoid skin contact. Keep container tightly closed when not in use. Store out of reach of children and pets.

Disposal
Best: Use up or give away. Rinse out empty container and dispose in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
- Follow operating instructions for your wood stove.
- Burn dry, clean wood. Firewood should be seasoned (dried) at least six to eight months before use.
- A hot fire will burn wood more completely and cleanly.
- Do not damper too far. Smoldering fires can cause the most soot and creosote buildup.
- Use a flue brush.
- Have your chimney professionally cleaned at least once per year, preferably in the fall.

Stain/spot removers

Common hazardous ingredients
ammonium hydroxide, isoamyl acetate, naphtha, oxalic acid, perchloroethylene, petroleum distillates, sodium hypochlorite, trichloroethane

Potential hazards
Flammable; highly toxic; vapors easily inhaled; absorbed through skin contact. Air pollutant.

Use and storage
Avoid aerosol products. Use in a well-ventilated area. Wear nitrile gloves to avoid skin contact. Keep children and pets out of the room in which you are working. Keep container tightly closed when not in use. Store in a locked cabinet or out of reach of children and pets and away from sources of flames.

Disposal
Best: Use up or give away. Dispose of empty nonaerosol container in the garbage.

Second best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives
General procedure
The basic procedure in stain removal is to remove as much of the stain as possible by blotting or scraping. The sooner this occurs the better. If the fabric allows and the stain is still wet, rinse with plenty of water to dilute the stain. After that, use an appropriate removal material. Final traces can be laundered or bleached out, if compatible with the fabric care instructions. Always read clothing labels to determine what is advisable. Try first on an unexposed area of the article to make sure no harm occurs to the fabric.

Wet spotter
1 part glycerin
1 part liquid dishwashing detergent
8 parts water
Removes many kinds of stains.
Store in a labeled plastic squeeze bottle. Shake well before each use.

Ballpoint pen ink
- Dab with glycerin or rub with a paste of cream of tartar.

Fruit/berry stains
- Hold tea kettle 3 feet above the fabric and pour boiling water on the stain. Place item in tub or basin to prevent splashes.

Grass stains
- Often impossible to remove. Try first with alcohol, follow with dishwashing liquid or wet spotter. Rinse, then soak in laundry enzyme product and water.

Mildew stains
- Use strong vinegar. Allow to dry. Rinse with water.

Pet urine
- Act quickly. Dried urine is hard to remove and can leave a persistent odor. Blot as much as possible. Rinse thoroughly with cool water and distilled vinegar solution. Apply dishwashing liquid or wet spotter and rinse with cool water.
- Use an enzyme-activated pet cleaner, follow directions.

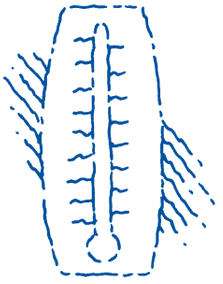
Protein stains (milk, cream, ice cream, mayonnaise, egg, fruit, blood)
- Avoid warm or hot water, which will set stain. Soak for at least half an hour in a laundry enzyme product, then launder in cool water. If blood stains persist after the enzyme treatment, try hydrogen peroxide before laundering.

Red wine
- Blot up as much as you can as quickly as possible. Apply a thick layer of salt and rinse out after salt has absorbed the spill. In a pinch, white wine also does an adequate job, as does club soda. If the stain has dried, try rubbing alcohol.

Tomato sauce, tomato juice
- Blot up excess. Apply club soda with a soft cloth and continue to blot. Most of stain should come out. Launder if possible.

! For more information on stain removal, contact the home economics section of your local OSU County Extension Office.

Thermometer, medical/ household



Common hazardous ingredients
metallic mercury (liquid)

Potential hazards
Vapors are harmful if inhaled; broken thermometers pose a danger of long-term vapor inhalation if not cleaned up properly. The bulbs of thermometers containing mercury are usually silver in color. Women who are pregnant and children are at most risk. Mercury products can pollute the air, soil and water when incinerated or landfilled.

Disposal
Best: Take your mercury thermometer to a household hazardous waste facility or to a household hazardous waste collection event. In Clackamas, Multnomah or Washington counties, call Metro Recycling Information (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9235.

In the event of breakage:
- Evacuate the room, turn off the air conditioning/ heating system and ventilate the area with fans and windows. This helps volatilize the mercury and allow it to escape outside, where it is less dangerous.
- Clean the area. Avoid vacuuming or sweeping, if possible, this will spread the mercury around. DO NOT use cleaning products, they may react with the mercury.
- Use gloves to protect hands and remove jewelry – mercury may attach to gold or silver.
- Try to wipe or scrape up mercury and place all cleaning items, gloves or other contaminated items into a sealed contained. Label the container: "contains mercury."
- Take the sealed container to a household collection facility or event. If this option is not available in your community, you can dispose the container in your regular garbage.

Concerned about a mercury exposure? Contact:
Oregon Poison Control Center, (800) 222-1222.

Mercury-containing fish advisories:
Oregon Health Division, (503) 731-4025.

Alternative
- Mercury-free alternatives are digital, aneroid and alcohol thermometers, and for most applications they are as accurate as mercury thermometers. Digital thermometers tend to last longer, however, because they are less likely to break.
- See DEQ Mercury Thermometer fact sheet: www.deq.state.or.us/wmc/solwaste/hhw.html

Thermostats

Common hazardous ingredients
metallic mercury (liquid)

Potential hazards
Vapors are harmful if inhaled. Women who are pregnant and children are at most risk. Mercury products can pollute the air, soil and water when incinerated or landfilled.

Use
Most thermostats, other than electronic thermostats, contain mercury. To determine if a thermostat contains mercury, remove the front plate. Mercury-containing

thermostats contain one or more small mercury switches. If you choose to remove an old thermostat **don't** remove the switches or dismantle the thermostat. Remove the entire mechanism and store safely until you have an opportunity to dispose of it safely. If you are having a new thermostat installed by a professional, ask them to recycle the thermostat.

Disposal

Best: Take your mercury thermostat to a household hazardous waste facility or to a household hazardous waste collection event. In Clackamas, Multnomah or Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9235.

In the event of breakage:

- Evacuate the room, turn off the air conditioning/heating system and ventilate the area with fans and windows. This helps volatilize the mercury and allow it to escape outside, where it is less dangerous.
- Because thermostats contain more mercury than a household thermometer, it is recommended that you contact your local fire department or the Oregon Emergency Response System at 1-800-452-0311 to get help with proper cleanup.

Concerned about a mercury exposure? Contact:
Oregon Poison Control Center, 1-800-222-1222.

Mercury-containing fish advisories:
Oregon Health Division, (503) 731-4025.

Alternative

- Consider installing mercury-free thermostats in your home.

! Programmable electronic thermostats are more energy efficient than their mercury-containing counterparts. Look for programmable thermostats that have the Energy Star label.

Transmission fluid

Common hazardous ingredients

petroleum distillates

Potential hazards

Ignitable; toxic; surface and groundwater pollution if improperly disposed.

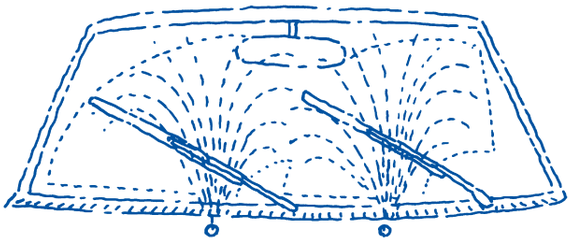
Use and storage

When changing your transmission fluid, wear nitrile gloves to avoid skin contact. Drain used fluid into a metal or plastic catch pan. Do not use absorbent-containing "easy-change" boxes to catch your used fluid. The fluid cannot be recycled once in these boxes. Pour fluid into a well-rinsed, nonbreakable container with a screw-on lid (milk jugs work well). Store away from children, pets and sources of ignition. Do not mix with used motor oil or other automotive products.

Disposal

Best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Windshield wiper solution



Common hazardous ingredients

ethylene glycol, methanol

Potential hazards

Highly toxic; harmful or fatal if ingested; air pollutant.

Use and storage

Avoid using solution that contains methanol. Use in a well-ventilated area. Wear nitrile gloves to avoid skin contact. Keep container tightly closed when not in use. Store in a secure place.

Disposal

Best: Use up or give away. Dispose of empty container in the garbage.

Second best: If connected to a city sewer system, flush small amounts that DO NOT contain methanol down an inside drain (toilet preferably) with lots of water. Do not flush to a septic system.

Third best: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives

- Look for the least toxic product available.
- Make your own fluid using:
  a gallon jug
  1 quart of alcohol (rubbing)
  1/4 cup of vinegar
  a few drops of liquid soap
  Fill with water, mix, fill car container.

Wood preservatives

Common hazardous ingredients

arsenic, copper salts, creosote (a mixture of phenols including pentachlorophenol), mineral spirits, naphthenic acid

Potential hazards

Wood preservatives restricted from household use have long-term (chronic) health effects. Creosote and inorganic arsenic compounds are known human carcinogens. Creosote has been linked to genetic damage, inorganic arsenic compounds are related to both genetic damage and birth defects, and penta (pentachlorophenol) is associated with birth defects and fetal toxicity. Unrestricted wood preservatives may be flammable and are toxic.

Use and storage

Use in a well-ventilated area according to label instructions. Never burn wood treated with preservatives, the fumes will be toxic. Wear nitrile gloves to avoid skin contact. Keep container tightly closed when not in use. Store in a box lined with plastic in a locked cabinet and away from children and pets.

Disposal

Best: Use up nonrestricted products or give to someone who will, such as a farmer. Dispose of empty container in the garbage.

Second best or best if restricted: Take to a household hazardous waste facility or collection event. In Clackamas, Multnomah and Washington counties, call Metro Recycling Information at (503) 234-3000. Elsewhere in Oregon, call 1-800-732-9253.

Alternatives

- Wood must contain 20 percent moisture before it can support the growth of fungi, the primary agents of wood decay. Wood plus moisture equals decay! Corrective steps to allow the wood to stay dry will stop decay in its early stages. Once the moisture source is removed, even the uncommon "dry-rot" fungi will die after a month's drying of the infected wood.
- Choose cedar when possible. It contains natural resins that prevent decay in the presence of fungi or insects.
- Buy pressure-treated lumber. The preservative penetrates the wood more effectively than hand-application and exposure is minimized. However, leaching is a problem and so is future disposal. DO NOT use pressure-treated wood for raised bed gardens of edible food. It may leach into the soil and be absorbed by plants. DO NOT use pressure-treated wood for building children's playgrounds. Chemicals may be absorbed through children's hands and pose a health risk.
- For patio furniture, use a water repellent or paint instead of wood preservative.
- For raised bed gardens, use bricks, blocks, old lumber, plastic lumber or construct without a retainer. OSU Extension Fact Sheet 270 details the procedure. Obtain at your local OSU County Extension Office.

! Restricted from household use: Use of wood preservatives containing creosote, inorganic arsenic compounds (CCA), pentachlorophenol (penta) and tributyl tin are banned for household use. Only licensed applicators can purchase and apply. Products treated with them, however, are still sold to the general public, but are set to be phased out by the end of 2003. If you have a deck or outdoor furniture treated with these chemicals, EPA advises you to seal them with at least two coats of varnish or other sealant.

Glossary

Absorption: The uptake of substances by the skin, respiratory and gastrointestinal tract. Also refers to the uptake of substances by plant parts or organs.

Acute: One-time or short-term exposure; used to describe brief exposures and effects that appear promptly after exposure.

Acute toxicity: The rapid onset of an adverse effect from a single exposure. Acute toxicity of a compound is not an indicator of its chronic effects.

Adequate ventilation: At least two open windows with a fan placed in one of them, the air stream of fan directed outward. One open door or window or a kitchen or bathroom exhaust fan does not create adequate ventilation.

Aerosol: A small particle or a liquid suspended in a gas.

Aerosol product: A pressurized, self-dispensing product form used for a wide variety of chemical specialty products.

Air pollutant: Any substance in air that could, in high enough concentration, interfere with human health or welfare, or harm animals, vegetation or material.

Borax: Also called sodium borate. Hard, odorless crystals, granules or crystal powder. Moderately toxic.

Carcinogen: A substance or agent capable of producing cancer in living animal tissue.

Caustic: A chemical that will burn skin on contact (corrosive effect on living tissue).

Chemical sensitivity: Health problems characterized by effects such as dizziness, eye and throat irritation, chest tightness, and nasal congestion that appear whenever an individual is exposed to certain chemicals, even in small amounts.

Chronic: Occurring over a long period of time, either continuously or intermittently; used to describe ongoing exposures and effects that develop only after a long exposure.

Chronic toxicity: The slow or delayed onset of an adverse effect, usually from multiple, long-term exposures. Chronic toxicity of a compound is not an indicator of its acute effects.

Corrosive: Having the power to slowly dissolve. Example: Some pesticides dissolve rubber hoses, nozzles and other parts of spray machinery.

Combustible: Substance that can easily be set on fire and that will burn readily or quickly. Flammable.

Cumulative: Often the effect of repeated exposures to chemicals is greater than single exposures. The cumulative effect is what occurs from repeated exposures over time.

Desiccant: A substance that induces drying by absorbing water.

Dose: The quantity of chemical administered at one time.

Dusts: Formed when solid materials are broken into small particles.

Exposure: Contact of an organism with a chemical, physical or geological agent.

Flammable: Substance that can easily be set on fire and that will burn readily or quickly.

Fumes: Small particles created in high heat operations such as welding or soldering that become airborne when exposed to heat. Fume particles are very small and tend to remain airborne for long periods of time. Metals, some organic chemicals, plastics and silica can produce fume particles.

Gases: Substances that become airborne at room temperature. They may or may not mix with air.

Hazard: The potential that the use of a product will result in an adverse effect on a person or the environment.

Ignitable: Substance capable of being set on fire.

Inert ingredient: A substance contained in a product that will, by itself, not add materially to the effectiveness of the product. Many inert ingredients are hazardous.

Ingestion: When a substance is taken into the body through swallowing.

Inhale: To take into the lungs by breathing.

Irritant: An agent that produces chafing, soreness, or inflamation, especially to the skin.

Mists (aerosol)**:** Tiny liquid droplets in the air. Any liquid, water, oil or solvent can be in a mist or aerosol form.

Mucous membrane: The tissue that forms the lining of body cavities, such as the nose and mouth.

Organic solvents: A solvent is any liquid that will dissolve another substance to form a solution. Solvents that contain carbon are known as organic solvents. Organic solvents may be toxic and many are flammable.

Pesticide: A chemical or biological agent that kills pests. A pest can be an animal, fungi, insect, plant or any unwanted species.

Petroleum distillates: Mixtures of chemical compounds derived from the distillation of petroleum. Most are highly toxic if ingested.

Pine oil: Derived from steam distillation of wood from pine trees. Used in many household disinfectants and deodorants. Skin irritant and may cause allergic reactions, central nervous system damage in concentrated form.

Poison: Any toxic substance that upsets normal functions in a living organism by surface absorption, injection or ingestion, eventually leading to death if the dosage is sufficiently strong.

Radioactive: Substance capable of giving off radiant energy in the form of particles or rays by the spontaneous disintegration of atomic nuclei.

Reactivity: Tendency of a substance to undergo chemical change. May occur when exposed to other substances, heat, sudden shock or pressure.

Repellent: A chemical or biological agent that makes unattractive to pests a habitat, food source or other site ordinarily sought and frequented.

Respiratory system: Generally the nose, nasal passages and lungs.

Risk: The probability of injury, disease or death under specific circumstances.

Silica gel: Precipitated silicic acid in the form of lustrous granules, especially prepared for absorption of various vapors. Mildly toxic.

Smoke: Formed from burning organic matter. Contains a mixture of many gases, particulates, vapors and fumes.

Solvent: A liquid that will dissolve a substance, forming a solution. See "Organic solvents" listing.

Toxic: Harmful. Poisonous.

Vapors: The gaseous form of any substance that is usually a liquid or a solid. Most liquids vaporize continually. The rate of evaporation increases as the temperature rises. Vapors are easily inhaled.

Volatile: A substance that evaporates quickly, such as alcohol.

Volatile organic compound (VOC): Certain chemicals that readily volatilize into the air and may cause both indoor and outdoor air pollution problems.

Well-ventilated area: Is either outdoors or, if indoors, an area with at least three or more open doors or windows with a fan placed in one of them. The air stream of the fan is directed outward. One open door or window or a kitchen or bathroom exhaust fan does not create a well-ventilated area.

Additional Resources

The following resources contain a wealth of information about hazardous household products, health effects, precautions and alternatives. These resources are provided for the purpose of convenience and do not represent an endorsement by Metro or DEQ.

A Consumer's Dictionary of Cosmetic Ingredients. 1989. Ruth Winter. Crown Publishers, Inc., New York, N.Y.

Artist Beware: The Hazards of Working with All Art and Craft Materials and the Precautions Every Artist and Photographer Should Take. 2001. Michael McCann. Lyons Press, New York, N.Y.

The Artist's Complete Health and Safety Guide. 1990. Monona Rossol. Allworth Press, New York, NY.

Ask the Bugman!: Environmentally Safe Ways to Control Household Pests. 2002. Richard Fagerlund.

Bug Busters: Poison Free Pest Controls for a House and Garden. 1991. Bernice Lifton. Avery Publishing, Garden City Park, N.Y.

Better Basics for the Home: Simple Solutions for Less Toxic Living. 1999. Annie Berthold-Bond. Three Rivers Press, New York, N.Y.

Clean and Green: the Complete Guide to Non-toxic and Environmentally Safe Housekeeping. 1990. Annie Berthold-Bond. Ceres Press. Woodstock, N.Y.

Clean House, Clean Planet: Clean Your House for Pennies a Day, the Safe Nontoxic Way. 1996. Karen Logan. Pocket Books, New York, N.Y.

Common Sense Pest Control Quarterly. Available from Bio-Integral Resource Center, PO Box 7414, Berkeley, CA 94707, www.birc.org.

The Consumer Products Handbook: A Comprehensive Guide to Today's Household Chemical Products. 1992. The Chemical Specialties Manufacturers Association, Inc., 1913 Eye St. NW, Washington, D.C. 20006.

Dead Snails Leave No Trails: Natural Pest Control for Home and Garden. 1996. Loren Nancarrow, Janet Hogan Taylor. Ten Speed Press, Berkeley, Calif.

The Encyclopedia of Natural Insect and Disease Control. 1984. Roger B. Yepsen Jr., ed. Rodale Press, Emmaus, Penn.

The Gardener's Guide to Common Sense Pest Control. 1996. William and Helga Olkowski and Sheila Daar. The Taunton Press, Newtown, Conn.

Health Hazards in the Arts: Information for Artists, Craftspeople, and Photographers. http://wally.rit.edu.pubs/guides/healthhaz.html.

Home Safe Home "Alternatives" fact sheets. A series dealing with pesticides, gardening methods, cleaners, paints, solvents and other household products. Addresses disposal, safe use and alternatives. Oregon Department of Environmental Quality, 811 SW Sixth Ave., Portland, OR, 97204, (503) 229-5913 or toll-free 1-800-452-4011. Metro Recycling Information, 600 NE Grand Ave., Portland, OR 97232, (503) 234-3000.

Home Safe Home: Protecting Yourself and Your Family from Everyday Toxics and Harmful Household Products in the Home. 1997. Debra Lyn Dadd. Jeremy P. Tarcher/Putnam Books, New York, N.Y.

How to Clean Practically Anything. 2002. Consumer Reports Books. Consumer Union, Mount Vernon, N.Y.

The Inside Story: A Guide to Indoor Air Pollution. 1989. Environmental Protection Agency, Office of Air and Radiation, Washington, D.C. 20460.

Journal of Pesticide Reform. Available from the Northwest Coalition for Alternatives to Pesticides, 1249 Willamette St., Eugene, OR 97401, (541) 344-5044.

Least Toxic Home Pest Control. 1994. Dan Stein. Hulogosi Communications, Eugene, Ore.

Maria Rodale's Organic Gardening. Maria Rodale. Rodale Press, Emmaus, Penn.

The Natural Formula Book for Home and Yard. 1982. Dan Wallace, ed., Rodale Press, Emmaus, Penn.

Natural Gardening: A Guide to Alternatives to Pesticides. 2001. Metro Recycling Information, 600 NE Grand Ave., Portland, OR 97232, (503) 234-3000. Oregon Department of Environmental Quality, 811 SW Sixth Ave., Portland, OR, 97204, (503) 229-5913 or toll-free 1-800-452-4011.

The Naturally Clean Home: 101 Safe and Easy Herbal Formulas for Non-Toxic Cleansers. 1999 Karyn Siegel Maier. Storey Books, Pownal, Vt.

The Organic Suburbanite: An Environmentally Friendly Way to Live the American Dream. 2001. Warren Schultz. Rodale Press, Emmaus, Penn.

What is Household Hazardous Waste? Oregon Department of Environmental Quality. 811 SW Sixth Ave., Portland, OR 97204, (503) 229-5913 or toll-free 1-800-452-4011. www.deq.state.or.us

What's Hazardous in Your Home? Metro, 600 NE Grand Ave., Portland, OR 97232. (503) 234-3000.

For More Information

Federal Agencies

Product information

Consumer Product Safety Commission
Western Regional Office
600 Harrison St., Room 245, San Francisco, CA 94107
(415) 744-2966
www.cpsc.gov

Toxic substances and pesticides information

Environmental Protection Agency
1200 Sixth Ave., Seattle, WA 98101
1-800-424-4EPA toll-free
www.epa.gov/r110earth

EPA Pesticide Information Hotline

1-800-858-7378 toll-free
ace.orst.edu/info/nptn/

State Agencies

Solid waste reduction, recycling and household hazardous waste information

Oregon Department of Environmental Quality
811 SW Sixth Ave.
Portland, OR 97204
503-229-5913 or regional offices (see page 39)
1-800-452-4011 toll-free
www.deq.state.or.us

Pesticide regulations

Oregon Department of Agriculture – Plant Division
635 Capitol St. NE
Salem, OR 97301
(503) 986-4635
www.hod.hr.state.or.us\programs.htm cdpe

Pesticide toxicity

Oregon Health Division – Environmental Epidemiology
800 NE Oregon, Suite 705
Portland, OR 97232
(503) 731-4025
www.ohd.hr.state.or.us

Lead paint and other non-pesticide toxins

Oregon Health Division – Environmental Toxicology
800 NE Oregon, Suite 705
Portland, OR 97232
(503) 731-4015
www.ohd.hr.state.or.us

Mercury and other chemical fish safety advisories

Oregon Health Division
800 NE Oregon, Suite 705
Portland, OR 97232
(503) 731-4025
www.ohd.hr.state.or.us

Indoor air quality issues

Oregon Health Division – Environmental Services
800 NE Oregon St., Suite 731
Portland, OR 97201
(503) 731-4012
www.ohd.hr.state.or.us

Gardening, pest control, home economics and many other subjects

OSU County Extension Offices
(check your county government phone listings)

Metro Region

(Clackamas, Multnomah and Washington counties)

Waste disposal, recycling, home composting and household hazardous waste information

Metro
600 NE Grand Ave.
Portland, OR 97232
(503) 234-3000 Metro Recycling Information
(503) 797-1650 Metro Regional Environmental Management Department (information about household hazardous waste or solid waste management programs)
1-800-732-9253
www.metro-region.org

Other Organizations

Local information on solid waste disposal, recycling and household hazardous waste

City or county solid waste departments
Garbage haulers, transfer stations or landfills
Public health departments/county sanitarians
Recycling centers
(check local phone listings)

Pesticides and alternatives

Northwest Coalition for Alternatives to Pesticides
PO Box 1393
Eugene, OR 97440
(541) 344-5044
www.pesticide.org

Sustainable agriculture, organic methods, composting and related topics

Oregon Tilth
470 Lancaster Drive NE
Salem, OR 97301
(503) 378-0690
www.tilth.org

Washington Toxics Coalition

4649 Sunnyside Ave. N., Suite 540-East
Seattle, WA 98103
(800) 844-7233
(206) 632-1545
www.watoxics.org

Material Safety Data Sheets (MSDS)

http://msds.pdc.cornell.edu/msdssrch.asp

LRAPA – Lane Regional Air Pollutant Authority

1010 Main St.
Springfield, OR 97477
(877) 285-7272
(541) 736-1056
www.lrapa.org

Oregon Household Hazardous Waste Collection Facilities and Events

DEQ events
The Oregon Department of Environmental Quality, in cooperation with local governments, has conducted household hazardous waste collection events throughout Oregon since 1991. Call the statewide hotline or your regional DEQ office to find out about a collection event in your area. Ask for household hazardous waste information.

Benton County
Corvallis Disposal holds a free household hazardous waste collection event, usually in the spring. Call Corvallis Disposal at (541) 754-0444 for more information.

Portland metropolitan region (Clackamas, Multnomah and Washington counties)
Metro operates two permanent household hazardous waste collection facilities in the Portland area for residents of the Portland metropolitan area. Residents outside the region may use the facility if they obtain a voucher from DEQ or Metro. Call (503) 234-3000 or 1-800-732-9253 to obtain a voucher. For information about location and hours of operation, call Metro Recycling Information at (503) 234-3000. Metro also conducts community collection events in the tri-county area. Call (503) 234-3000 for information.

Gilliam County
Chem Waste Management accepts waste free from county residents. Call Chem Waste Management at (541) 454-2643 for more information.

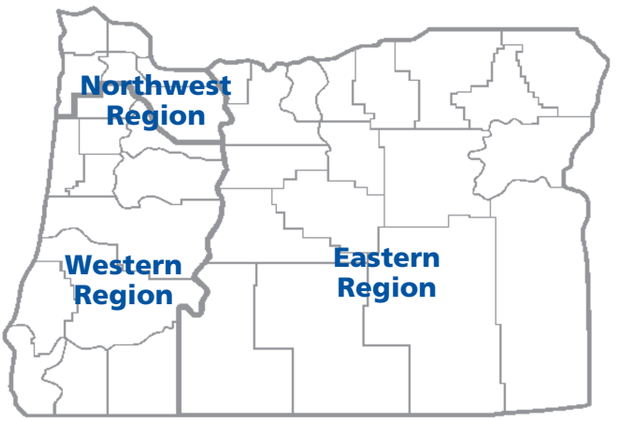
Lane County
Lane County households and conditionally exempt generators can take hazardous waste to the Glenwood Central Receiving Station, 3100 E. 17th Ave., Eugene. Collection events are also held periodically in other locations. Call the Lane County Waste Management Division at (541) 682-4119 for more information.

Linn County
Albany-Lebanon Sanitation holds a free household hazardous waste collection event, usually in the fall. Call Albany-Lebanon Sanitation at (541) 928-2551 for more information.

Medford/Ashland
Rogue Valley Disposal and Ashland Sanitary hold an annual household hazardous waste collection in the spring. Call Rogue Valley Disposal at (541) 779-4161 or Ashland Sanitary at (541) 482-1471 for more information.

Tillamook County
Tillamook County holds an annual household hazardous waste collection event in the fall for county residents only in Tillamook, Pacific City and Manzanita. Call (503) 842-3419 for more information.

Statewide hotline
In addition to DEQ sponsored events and the above listed programs, there are other locally run programs as well. Call 1-800-732-9253 or call your garbage hauler or local government solid waste department for household hazardous waste collection event information in your area.



DEQ regional offices, air, water & land:

Eastern Region
(541) 388- 6146
www.deq.state.or.us/er/

Northwest Region
(503) 229-5263
www.deq.state.or.us/nwr/

Western Region
(541) 686-7838
www.deq.state.or.us/wr/

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Notes

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