Tribal Guide for Managing Household Hazardous Wastes on the Nez Perce Reservation

Nez Perce Tribe
Water Resources Division
Solid Waste & Recycling Program
August 2023

© NPT 1995

Nez Perce Tribe Water Resources Division - Ken Clark, Director
Solid Waste & Recycling Program Staff: Jon Van Woerkom and Sonny Wisdom
Tribal Guide for Managing Household Hazardous Waste on the Nez Perce Reservation
Prepared by Linda Nemeth
Completed August 31, 2023
https://nptwaterresources.org

Table of Contents

Tribal Guide for Managing Household Hazardous Wastes on the Nez Perce Reservation

Introduction

The Nez Perce Tribe's history and culture are centered on respecting the earth (ʼapaqaʼánnoʼ ʼee kaa ʼepeqíicx̣nuʼ wéetesne)**.** The decision to protect the earth through proper solid waste management and recycling is not just a matter of economics and politics; it is about an indigenous people taking action to maintain the natural resources they rely upon. Reducing, recycling, reusing, and choosing green alternatives to hazardous household products provide a holistic approach to managing waste while preserving the Nimiipuu way of life for future generations.

Purpose and Summary of Guide

This guide is for Nez Perce Tribal members and other community members on the Nez Perce Reservation to help in understanding and managing their household hazardous wastes (HHW). Hazardous Waste, including household hazardous waste, can pose a serious threat to our environment and human health. This guide will help readers gain insight into HHW including proper purchasing, usage, storage and disposal methods, as well as enabling them to explore eco-friendly alternatives for various products. This will help to minimize pollution from HHW, benefit reservation communities, and protect the Nez Perce subsistence lifestyle.

The guide consists of basic information on HHW and other common wastes, followed by two appendices that provide information on alternatives to hazardous products. This guide is intended to be used by itself and/or incorporated into the Tribe's integrated solid waste management plan, Nez Perce Tribe "Beyond 2010" Solid Waste Master Plan (2007). Please note that the information in this guide is current as of August 2023 and may change.

Acknowledgments

This guide has been funded by the Nez Perce Tribe Water Resources Division through an EPA Tribal Hazardous Waste Program Management Grant.

The Tribal Solid Waste Advisory Network (TSWAN) assisted with a green cleaning event that was held in conjunction with the development of this document and provided hazardous waste resources and references. Training provided by the Institute for Tribal Environmental Professionals (ITEP) Tribal Solid Waste Education and Assistance Program for Managing Household Hazardous Waste at Tribal Transfer Stations was invaluable in providing information that allowed us to develop this guidance. Patience and support from Rick McMonagle, our Tribal Solid Waste Liaison for SEE/EPA Region 10; Lucas DuSablon, our EPA Region 10 Tribal Coordinator; and Kayla Krauss, our EPA Region 10 Project Officer for Hazardous Waste Management Grants, were also invaluable. Thank you all.

What is Household Hazardous Waste?

Household hazardous waste comes from products we use every day in our homes. These products become a hazard when improper use or disposal will cause a threat to the environment or human health. When leftover paint, used oil, antifreeze, weed killer, bleach, and other products that contain hazardous materials are no longer wanted, they become Household Hazardous Waste (HHW). The federal government defines household hazardous waste as "leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients." Products that become household hazardous waste include cleaning products, indoor pesticides, automotive products, workshop and painting supplies, lawn and garden products, and other items. As the name suggests, household hazardous waste is from households and does NOT include waste from businesses, government, or schools. HHW does NOT include explosives or radioactive waste, no matter where it comes from.

Categories of Household Hazardous Waste Properties

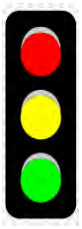
Many of the products we use have hazardous properties that make them become household hazardous waste when we dispose of them. Products that contain one or more of the following properties are considered HHW:

Symbol	Properties	What it Does	Examples of Products
	Toxic / Poisonous	Harmful or fatal when inhaled, ingested, or touched.	Household cleaners, pesticides, fertilizers, alkaline batteries, antifreeze, prescription medicines
	Corrosive / Caustic	Eats through other materials, including your skin.	Household cleaners, drain cleaner, over cleaners, bleach, automobile batteries
	Flammable / Combustible	Can easily be set on fire or ignited.	Paints, solvents, aerosol cans, motor oil, kerosene, camping fuel, gasoline
	Explosive / Reactive	Can explode or create toxic fumes and gases under heat and pressure or when mixed with water or other products or chemicals.	Aerosol cans, propane cylinders and tanks, camping fuel, batteries, drain cleaner, oven cleaner, bleach,

Is It Hazardous?

The four categories above are how the products are classified, but how do you *know* if it is hazardous when you go to buy it? **Read the label.** Look for these signal words: "**danger," "warning," or "caution**." Compare product labels and choose the least potentially hazardous product that will best meet your needs. But be aware that "non-toxic" has no federal regulatory definition. It is only an advertising word.

Look for Signal Words



Danger or Poison – poisonous, extremely flammable or corrosive

Warning or Caution – somewhat less hazardous

No signal words – usually the least hazardous

Examples of Products Typically Considered HHW

Cleaning Products: Drain cleaners, toilet cleaners; tub, tile, and shower cleaners; oven cleaners; drain cleaners; wood and metal cleaners and polishers; bleach.

Indoor Pesticides: Ant sprays and baits; bug sprays; flea repellants and shampoos; moth repellents; mouse and rat poisons and bait; houseplant insecticides; cockroach spreads and baits.

Automotive products: Motor oil; fuel additives; carburetor and fuel injection cleaners; engine coolant (antifreeze); starter fluids; automotive batteries; transmission and brake fluid; air conditioning refrigerants.

Workshop/Painting supplies: Stains and finishes; paint thinners and turpentine; oil- or enamel-based paint; adhesives and glues; furniture/paint strippers; photographic chemicals; fixatives and other solvents.

Lawn and Garden Products: herbicides, insecticides, fungicides, wood preservatives, weed killers.

Miscellaneous Flammable Products: Diesel fuel; gas/oil mix; propane tanks and other compressed gas; gas cylinders; kerosene; home heating oil; lighter fluid.

Miscellaneous: Batteries (non-rechargeable lithium-ion); mercury thermostats or thermometers; fluorescent light bulbs.

Americans generate over 1.6 million tons of HHW per year; that's about 100 pounds of HHW for every household!

Management Strategies for HHW

The best way to deal with HHW is to avoid creating it. The Nez Perce Tribe's household hazardous waste management strategy emphasizes reduction, reuse, and recycling followed by proper disposal. The most important benefit of this strategy is that it is a sustainable strategy, one that helps protect the environment, is easily followed by community members, and is economically feasible for the Tribe. Using this strategy helps preserve the environment, reduces costs, and allows our communities to remain healthy. Please use the pre-purchase checklist of questions below before buying or using products.

Pre-Purchase Safety Checklist

Do I really need this product?

Is there a safer alternative?

Have I checked for signal words? (Danger, Poison, Warning, Caution)

Does this product require the use of safety equipment? (Gloves, Safety Goggles, Mask)

Can I safely store this product in my home?

Am I buying more than I need?

Can I safely dispose of the excess, or do I need to take it to a HHW collection site?

Can I share the unused portion with friends, neighbors, relatives, or others?

Purchasing Products

- **Read the label first**. Buy the least hazardous products you can find or try the alternatives in the booklets attached to this document (appendices).
- Buy only what you need so you can use it completely (more is not better); then you have no storage or disposal issues (*empty* containers can be thrown in the trash).
- If you have leftover products, see if someone else can use them (except pesticides, which should be turned in to collection programs).

Storage

- **Read the label first**. Follow the recommendations on the label for how to store the product.
- Keep unused hazardous materials tightly sealed in original containers with labels intact and readable.
- Store hazardous materials in a cool, dry place that children and pets cannot access.
- Do not mix different products. This can cause explosions or poisonous chemical reactions.
- Highly flammable products should be kept in a separate outbuilding if possible; keep flammables away from heat, open flames, and sparks.
- Some pesticides should not be stored where they can freeze.

Usage

- **Read the label first.** It should tell you what equipment you need to use for a specific product.
- Nitrile gloves will protect your hands against most products; acids and bases require heavy rubber gloves.
- Work in a well-ventilated area. Work outside or open doors and windows. Use a fan pointed outside.
- Avoid wearing contact lenses when working with hazardous products; contacts can absorb vapors and trap them in your eyes.
- Wash body parts and clothing when finished using a hazardous product.
- Clean up before you eat or smoke, even if you wore gloves, to avoid accidental ingestion.

Key Takeaways

Buy only what you need and use it up.

Use safer alternatives and green cleaning options.

Use, store, and dispose of any HHW products properly.

Disposal

- **Read the label first.** Keep products in original containers. If a product does not have its original label, label it yourself if you are sure of the contents.
- Do not 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 leakproof container.
- HHW can be transported without following hazardous waste transportation regulations, but be sure to properly prepare household hazardous waste for transport or collection:
    - If you are transporting HHW, pack containers in sturdy boxes in the trunk of your vehicle, away from the driver, passengers, and pets.

Key Takeaways

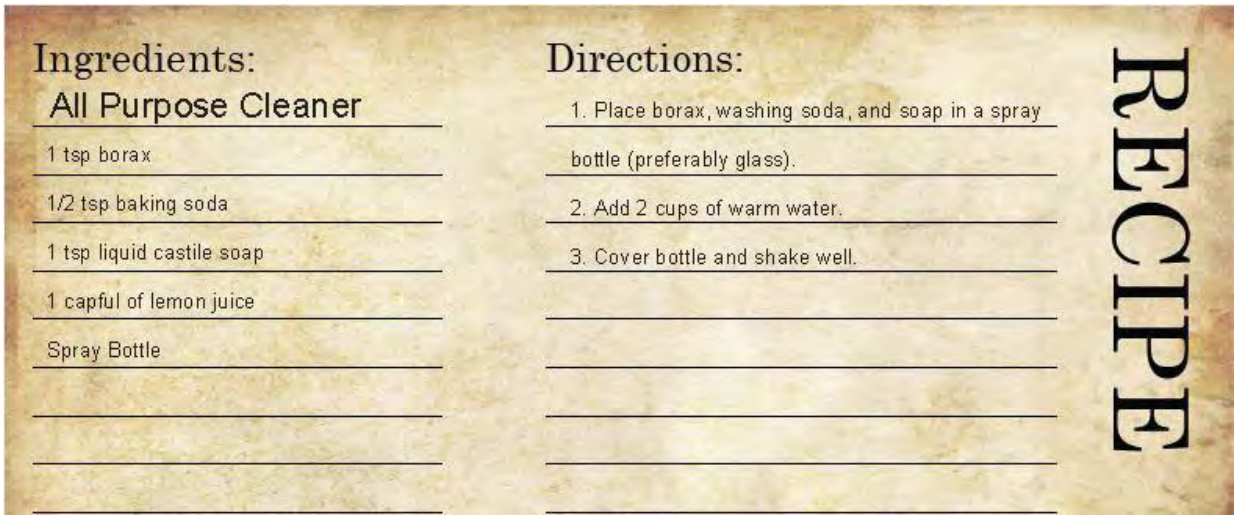
Separate HHW from our regular trash.

Store HHW safely in our homes.

Deliver HHW to a local collection site in for treatment and disposal.

Alternatives and Green Cleaning Products

The Tribe's strategy for managing HHW encourages people to be good stewards of our natural resources and use less harmful alternatives to household cleaning supplies and other products. There are so many resources and recipes out there on the internet to help you buy or make safer alternative products and green cleaning products.



At the end of this guide, there are two documents in the appendices that are full of less toxic alternatives. The *Guide to Hazardous Household Cleaning Products and Less toxic Alternatives* by the Santee Sioux Nation Office of Environmental Protection discusses some of the common hazardous ingredients in cleaning products and provides instructions for making 26 alternative cleaning products, from air freshener to wood cleaner. Idaho DEQ's document *Eliminating Household Hazardous Waste* has an A-Z guide to 48 common hazardous household products and materials and provides information on the hazardous ingredients, product hazards, use and storage, disposal suggestions, and alternatives for each type of product.

Dangers of Improper Disposal of HHW

Household hazardous waste can harm the environment and human health if it is not properly handled and disposed of. How does this happen? If excess HHW is disposed of on the ground or through storm drains, it can wash into nearby streams or percolate down to groundwater and threaten water quality. If unwanted HHW is disposed of in the trash, it winds up in the landfill and can pose a threat to surface

and groundwater sources. Improperly disposed waste could also cause injury to sanitation workers.

Examples of Harm to our Environment

Many hazardous products, unless segregated and collected separately from other wastes, can damage the environment, including contamination of soil and water and air pollution. Environmental damage can occur in several ways, including:

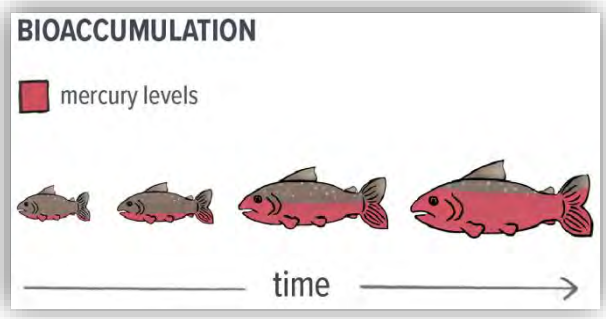
- Direct releases to the environment by dumping outside:
  - Dumping used oil on the ground,
  - Throwing automotive batteries in a roadside ditch,
  - Herbicides dumped in a ditch or down the storm drain,
  - Throwing materials used to make small batch meth along a road or in a ditch.
- Mixing HHW with regular trash or recycling can cause containers to break or leak allowing hazardous material to seep out, contaminating soil and water.
- Harmful chemicals in the soil can kill microbes and bacteria that are an essential part of the nutrient cycle, leading to soil sterility and decreased plant health and diversity.
- Contaminants in soil and water are often washed into our streams, lakes, and rivers killing fish and the aquatic insects they depend on for survival.
- Hazardous waste that seeps into the soil also affects groundwater, which is the primary source of drinking water on the reservation,
- Releases from disposal sites such as landfills and incinerators, or from wastewater treatment facilities also harm our environment.
- Even disposal of some types of HHW in lined landfills can result in environmental damage. For example, mercury disposed of with regular garbage will eventually leach out of the landfill and into surface water and groundwater.

Examples of Harm to Human Health

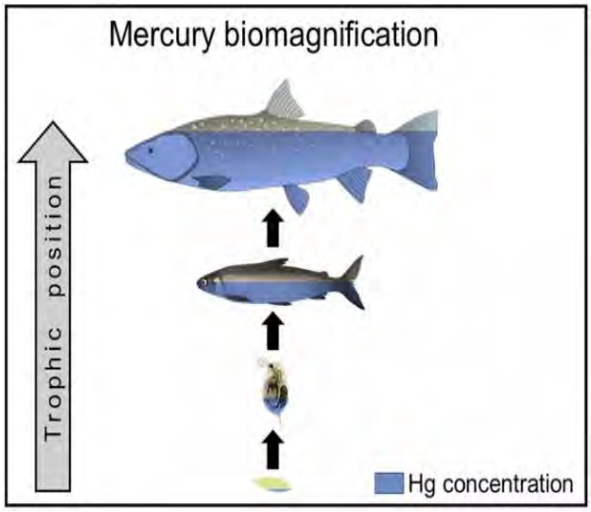
- Some pesticides, when used improperly (e.g., overapplication), may enter surface waters and contaminate drinking water.
- Improperly stored products can result in accidental poisoning of both children and animals through drinking, eating, touching, or breathing toxic chemicals.

- Storage of flammable products (solvents, fuels, oil-based paint) in homes may start fires, add to the fuel load of buildings, and endanger firefighter safety.
- At waste facilities, including recycling facilities, collection workers can be injured or endangered because of hazardous waste disposal from households.
    - Some chemicals are highly reactive and can release a poisonous gas if mixed or exposed to water.
    - Flammable products may ignite inside the collection vehicle or disposal facility.
    - Used needles thrown in the recycling in open plastic bottles can injure workers sorting the recycling and expose them to diseases and infections.

- Some harmful chemicals are known to bioaccumulate, meaning the chemical is absorbed by the body faster than it is released, so it builds up in the body. These chemicals are stored in tissues of organisms, including fish and wildlife, and the amount increases over time.



These chemicals also biomagnify, meaning the concentrations of the chemicals become more concentrated as they move up the food chain. This occurs because animals at the top of the food chain consume many smaller organisms that have already accumulated the toxins, increasing the concentration of the toxins in their own bodies. This can have harmful effects on animals, and the accumulation of enough of these chemicals in our bodies can cause chronic health issues.



Benefits of Proper Disposal of HHW

Just as improper disposal of household hazardous waste presents dangers to our environment and our health, proper disposal of HHW benefits us all. How? Proper disposal helps to:

- Protect our children and pets from direct contact with hazardous substances.
- Prevent unexpected reactions and exposures that may harm our solid waste and maintenance workers.
- Maintain healthy soil microbes and bacteria to protect plant health and increase plant diversity.
- Conserve our freshwater systems and the health of fish and aquatic insects.
- Protect food supplies including crops and our forest resources such as deer and elk.
- Prevent pollution of our groundwater and therefor our drinking water.
- Protect our bodies from bioaccumulating dangerous levels of harmful chemicals.

Typical Collection Options for Proper Disposal of HHW

Collection events can be a one-time collection event, where a contractor is hired to dispose of the household hazardous waste. Locally held county-wide collection events are another option if they are available. Multi-community collection events can be an option. Permanent in-house collection programs are also used by some tribes and many cities or counties. The Nez Perce Tribe does not currently have an HHW collection program. Based on the experience and training of Nez Perce Tribe Solid Waste and Recycling staff, it is not in the Tribe's best interest to start a

collection program at this time. Some things to be considered if the Tribe wants to further investigate holding collection events or starting a program are provided in the following table.

Collection Options Pros and Cons*

Collection Option	Pro	Con
One-time collection event	• Contractor handles the household hazardous waste. • May not need to train tribal staff. • *Tribe not liable*	• Expensive ($12-20,000 in 2007) • Hiring a contractor means tribal staff does not gain experience for future collection events. • Takes time to get bids; potential for receiving no bids
Participate in locally held county-wide HHW collection event	• Less expensive than hiring own contractor. • *Tribe not liable*	• County may limit the amount and type of waste you can bring – it depends on the county
Multi-community collection event	• Potentially less expensive in the long run because costs will be shared. • More control over program • Can build on already existing relationships or cooperative agreements with other entities	• Need well-trained staff. • Start-up costs may be high in terms of staff time and investments in some equipment. • Takes time to build solid waste partnerships. • *Potential liability for Tribe*
Permanent in-house collection program	• Potentially less expensive in the long run • More control over program	• Need well-trained staff; need additional program staff. • Start-up costs will be high. • Takes at least a year of planning. • Will need to build a secure facility to store the waste. • *Potential liability for Tribe*

*Table based on table from Household Hazardous Waste Collection: A Program Guide for Tribal Governments. EPA-909-K-07-001. 2007. US EPA, Pacific Southwest Region 9.

The best way to deal with HHW is to avoid creating it!

Purchase Less.

Use it up.

Give it away.

Use safer alternatives.

Current Local Options for Disposal of HHW

Household Hazardous Waste collection programs ensure hazardous materials are properly handled and sent to facilities designed to treat or dispose of hazardous waste. As mentioned above, the Nez Perce Tribe *does not currently have an HHW collection program*. Although counties throughout North Central Idaho may hold occasional events, there are no regular collections throughout the year and no curbside collection for HHW products. Tribal members and residents living within the reservation boundaries are encouraged to contact local hazardous waste facilities to inquire about programs, specific HHW items, and amounts that can be taken to transfer stations or landfills. Options for taking HHW to local facilities are listed in the table below. It is best to call ahead and check on what they take, whether you can take it to that facility, and if there is a charge for that. In some cases, you must be a resident and pay for trash services in that city/county. In other cases, the Tribe may have an agreement with the county or facility.

HHW Facilities on or near the Nez Perce Reservation

HHW Facility	Hours of Operation	For Residents of	Wastes Accepted	Quantity Limits	Website
Asotin County HHW Facility 2901 Sixth Ave. Clarkston, WA 99403 509-758-9230	Only open on Wednesdays and 1st & 3rd Saturday of each month: 8am to 4pm Closed major holidays	Free to Nez Perce County residents and *Nez Perce Tribe members*	Paints & Adhesives Used Motor Oil Antifreeze Gasoline Cleaners Aerosols Herbicides Pesticides Fertilizers Mercury Thermometers Switched & Thermostats Other Flammable Materials Other Poisonous Materials Electronics Light bulbs/lamps Rechargeable, Lithium & Automotive Batteries (Alkaline batteries may go in garbage & landfill)	Quantity Limits (Alone or Combined): 10 gallons total, or 20 containers	https://asotincountyregionallandfill.com/landfill/household-hazardous-wastes/
Nez Perce County HHW Facility Lewiston Transfer Station 1301 Colonial Wright Way Lewiston, ID 83501 208-746-0389	Monday through Sunday 8 am to 4:30 pm Closed major holidays	Free to residents of Lewiston and those Nez Perce County residents who pay for solid waste collection services; (Not for use by residents of City of Lapwai, City of CuldesSac, and Nez Perce Tribe members)	Automobile batteries Common household batteries Latex paint Used antifreeze, 2gal/customer/day Used motor oill, 10gal/customer/day household cleaners no herbicides or pesticides	2 gal/day used antifreeze 10 gal/day used motor oil	https://www.cityoflewiston.org/405/Transfer-Station
Clearwater County Transfer Station 585 Transfer Station Rd. Orofino, ID 83544 208-476-7903	Monday through Sunday 8 am to 4 pm Closed major holidays	Free to residents of Clearwater County including *Nez Perce Tribe members* (yard waste also free)	Automobile Batteries and Used Motor Oil 10gal/day; No Antifreeze or Household Cleaner or Mercury-Containing Items Tires cost $2.50 each for 22" diameter, with rims cost is $5 each	Small amounts only; up to 10gal used oil and 1 car battery/day	https://www.clearwatercounty.org/departments/index/index.php
Simmons/NADL Kamiah Transfer Station 3226 Hwy 162 Kamiah, ID 83536 208-935-2617	Monday through Sunday 9 am to 4 pm Closed major holidays	Free to residents of the City of Kamiah and those Idaho and Lewis County residents who pay for solid waste collection services	Used Motor Oil Anti-freeze Paint Household Chemicals Automotive Batteries No mercury items accepted. Please contact us with hazardous waste for safe disposal. Also 4 regular tires (car)/day. No HHW at Kooskia Drop Off site	Small amounts only; up to 10gal used oil and 1 car battery/day	https://simmons-nadl.com/transfer-station/
Latah County Solid Waste Processing Facility 3299 Hwy 8 Moscow, ID 83843 208-882-5724	8 am to 4 pm Apr-Oct: all Saturdays Nov-Mar: 1st Saturday of month Closed major holidays	Free to residents of Latah County who pay for solid waste collection services	Oil, Antifreeze, Oven Cleaners, Pesticides, and anything combustible, etc.	You may bring multiple containers of five gallons or less of hazardous waste during HHW hours of operation.	https://www.inlandnorthwaste.com/solid-waste-processing-facility

Always be sure to call the facilities to confirm open days and hours!

Special Wastes

Used Motor Oil

If you like to do it yourself when it comes to changing the oil in your car or truck, most oil-change facilities and auto parts stores accept used motor oil, though they may charge you a small fee, or you can take the oil to your local HHW facility (see box at right). Both places will send it to be recycled.

- Use a clean and leak-proof container to store old oil.
- Keep it stored in a cool, dry place away from sunlight and make sure not to mix it with other liquids.
- Recycle your used oil filter, too – puncture the top and let it drain into the container where the used oil is; it may take quite a while to drain.

Improperly disposed oil can contaminate drinking water and harm aquatic animal and plant life. Recycling used oil is good for both the environment and the economy.

- Re-refining used oil takes only about one-third the energy of refining crude oil to lubricant quality.
- It takes 42 gallons of crude oil, but only one gallon of used oil, to produce 2 ½ quarts of new, high-quality lubricating oil.
- One gallon of used oil processed for fuel contains about 140,000 British Thermal Units (BTUs) of energy.

Where can you take your used motor oil?

Kamiah—
Kamiah Transfer Station
3226 Highway 162
Open 9-4, 7 days a week

Orofino—
Clearwater County Transfer Station
585 Transfer Station Rd.
Open 8-3:30, Mon-Sat

Nez Perce County residents & Tribal Members —
Asotin Landfill
2901 6th Ave., Clarkston, WA
Wednesdays: 8am to 4pm and 1st & 3rd Saturday: 8am to 4pm

Lewiston—
Lewiston Transfer Station
1031 Colonel Wright Way
Mon-Sun, 8– 4:30

In some cases, you must be a resident and pay for trash services in that city/county.

Used Tires

Tires, especially piles of tires, are considered blight, present a serious fire risk, hold standing water that can breed mosquitoes that spread diseases, and contribute to groundwater contamination.

Used tires can be recycled in many areas although options are limited locally. Tires should be recycled because they are not biodegradable and take up significant space in landfills. This is not only bad for the environment, but it also reduces our ability to eliminate waste.

- **Tires are not biodegradable:** Tires can take hundreds or thousands of years to decompose. If tires are illegally dumped in nature, they will release toxins and poison the environment.
- **Tires take up a lot of space in landfills:** If tires are just thrown in landfills, the landfills will fill up too quickly and reduce our ability to get rid of normal waste. Also, tires rise to the top of landfills and attract insects and pests. This makes them a breeding ground for diseases.

Most tires that are recycled are chipped and used as a fuel source and burned for energy, also known as tire-derived fuel (TDF). The Rubber Manufacturer's Association estimates that the average passenger car tire produces over two gallons of oil when burned. More than 40% of TDF goes to cement kilns, but other uses include paper factories and electric companies.

Other uses of recycled tires include rubberized running tracks, shoe soles, playground covers, and crumb rubber asphalt in roads. There are ways that tires can be recycled into new products, and most of these uses take place after shredding since there is more demand for crumb rubber than whole tires.

What Can You Do with Your Used Tires?

Your best option as a resident of the Nez Perce Reservation is to pay the tire store to dispose of your tires when you buy new ones for your vehicle. Many retailers that sell tires will accept a limited number when you make a purchase. If you are shopping for new tires, be sure to ask if they will recycle your old tires. Most charge

a small fee of around $3 to dispose of the tires properly. Some of the transfer stations and landfills in the area will also take car and light truck tires (1-4 maximum at a time, for a small per-tire fee of $2.50 - $3.00 each). If there are rims on the tires, it costs more ($5 to $8 per tire depending on the store or the transfer station). Check with your tire store when you buy new tires, or call your local transfer station or landfill if you have used tires on your property. The table of "HHW Facilities on or near the Nez Perce Reservation" on page 14 has phone numbers to call for information.

Other Alternative Uses for Tires

You can use your imagination and consider a way to **reuse** your old tires. You can build a tire swing for the kids, use them as a planter in your backyard, build a sandbox for your children, or even turn them into household furniture!

Sharps

Many people use needles, syringes, lancets, and autoinjectors at home to care for their health. These items are called sharps. Used household sharps need to be stored safely and disposed of properly to protect people from injury and diseases such as Hepatitis B, Hepatitis C, and Human Immunodeficiency Virus (HIV).

You can put used sharps in a personal sharps container, which you can buy at your local drugstore. Or you can contact the Idaho Harm Reduction Project at 208-991-4574 or www.idahoharmreductionproject.org for a free, personal sharps container mailed directly to your residence. When contents have reached the "full" line, lock the container and place it in household trash.

You can also make your own container using a thick-walled plastic container with a tight sealing cap (laundry detergent jugs work best). Mark the container "**used sharps – do not recycle.**" Place sharps down point-first into the container. When full, cap the container with a lid and duct tape it shut. Dispose of the container in your household trash bin.

Safe sharps disposal is important whether you are at home, at work, at school, traveling, or in other public places such as hotels, parks, and restaurants. Pet owners who use needles to give medicine to their pets should follow the same sharps disposal guidelines used for humans. **Put sharps into your container as soon as you use them**.

Safe Disposal of Used Sharps

- Protects children, pets, and workers handling trash and recyclables from illness and injury.
- Prevents sharps from being re-used and shared, which can spread diseases.
- Protects the environment.

Unsafe Disposal

- Never place loose needles and other sharps (those that are not placed in a sharps disposal container) in the household or public trash cans or recycling bins, and never flush them down the toilet.
- Do not put loose used sharps or used sharps container in with the recycling.
- Do not put used sharps in soda cans, milk cartons, glass bottles or containers that can be broken or punctured, or in coffee cans because the plastic lids come off easily and may leak.

Prescription Drugs

Many pharmacies and police stations accept medications to ensure their disposal is done in an environmentally safe manner. When medications are improperly disposed of by flushing them down the toilet or throwing them in the trash, the chemicals can affect our water resources. Studies have shown that trace amounts of free-flowing pharmaceutical waste exists in our lakes, rivers, and streams. There are several drop-box locations around the reservation. Please protect our natural resources and our people by using these drop boxes for unwanted or unused prescriptions and medications. The list below lists verified (2023) locations of

prescription drop-off boxes on or near the reservation from the state list at https://odp.idaho.gov/prescription-drug-take-back-program/.

Lapwai:

Nimiipuu Health, 111 Bever Grade, Lapwai, ID 83540; (208) 843-2271

Recently reinstalled - a secure drop box for used prescriptions; located just outside the community health entrance, near the pharmacy drive-through; open 24/7; stickers on box tell what is accepted and not accepted:

Kamiah:

None in the Kamiah area. There was one inside of city hall, but it is no longer there.

Lewiston:

Walgreens 2102 Nez Perce Dr., Lewiston, ID 83501; 208-743-4434. Walgreens has a drop box inside by the pharmacy – just ask someone from the pharmacy to unlock it for your use.

Lewiston Police Department, 1224 F St., Lewiston, ID 83501; 208-746-0171. A drop box is located in the lobby which is open 8-5, but they do have 24-hour staffing, so you can ring the doorbell, and someone will let you in after

hours; for pills only, no liquids or needles; put in Ziploc or original bottles; securely destroyed by the evidence technician.

Orofino:

City Hall, 217 1st St., Orofino, ID 83544; 208-476-4725. There is a drop-box inside the City Hall; City Hall is open 8-5, M-F.

Clarkston:

Clarkston Police Department (805 5th Street in Clarkston) offers free and easy drop off.

Asotin County Sheriff (838 5th Street in Clarkson) also offers free and easy drop off.

Neither location takes: Needles/Sharps, Lotions/Ointments, or inhalers.

Moscow:

Moscow Police Department, 155 Southview, Moscow, ID 83843 A prescription drug turn-in box is in the lobby of the Police Department for public use during business hours from 8 am to 5 pm. Accepts all prescription, non-prescription and sample pills, tablets, and capsules; no needles or liquids.

Grangeville:

There is a drop-box inside city hall at 225 W North St, Grangeville, ID 83530; (208) 983-2851. The drop-box is available during business hours, 8-5, M-F. No liquid or needles. Drugs are packaged and sent to the DEA to be destroyed.

Pesticides and Herbicides

Not all local transfer stations or HHW facilities take pesticides. Check with your local facility. The Idaho State Department of Agriculture (ISDA) Pesticide Disposal Program provides free and safe disposal of unusable or unwanted pesticides. Homeowners, as well as farmers and dealers, can participate. Locally, these collections are often held at the Nez Perce County Fairgrounds in Lewiston in April. ISDA pesticide disposal sites will take most pesticides including herbicides, insecticides, fungicides, rodenticides, or anything ending with "cide." No fertilizer, micronutrients, paint, solvents, motor oil or rinsates other than seed treat rinsates are accepted. For information, locations, and dates, call (208) 332-8628.

Batteries

Batteries contain heavy metals such as mercury, lead, cadmium, and nickel, which can contaminate the environment when improperly disposed of. When incinerated, certain hazardous metals may be released into the air or can concentrate in the ash produced by burning.

Batteries contain reactive chemicals and metals that generate electrical energy. Recycling these valuable materials helps protect the environment and reduce dependence on mining for raw materials for use in batteries. Home Depot partners with Call2Recycle and is a drop-off site for recycling most types of batteries – check with the service desk to see what types of batteries they take.

There are two main types of batteries, single-use and rechargeable. Single-use batteries only work for a limited amount of time. When single-use batteries are dead, they must be replaced. Rechargeable batteries can be charged many times. They can used over and over. Both types of batteries can be made from different materials, and it is these materials that dictate their disposal.

Single-use batteries include alkaline and zinc-carbon batteries. AA, AAA, 9 volt, and D cells. These batteries are found in alarm clocks, remotes, flashlights, smoke detectors, children's toys, and other items. Single-use alkaline and zinc carbon batteries can be safely put in household trash.

Rechargeable batteries are found in cordless phones, smart phones, and digital cameras. Cordless power tools and similar devices use them too. Look for labels identifying battery chemistry. Do not put rechargeable batteries in the trash or municipal recycling bins. Removable rechargeable batteries can be brought to specialized battery recyclers, participating retailers that provide battery takeback services, or local HHW facilities. Place each battery in a separate plastic bag or place non-conductive tape (e.g., electrical tape) over the battery's terminals. **Take them to an HHW facility or a place with battery recycling such as Home Depot.**

Lithium batteries pose a fire hazard to waste management workers and collection facilities when disposed of in the municipal waste stream. Lithium-ion batteries and devices containing these batteries should NOT go in household garbage or recycling bins. **Take them to a HHW facility or a place with battery recycling such as Home Depot.**

- Lithium-ion batteries SHOULD be taken to household hazardous waste facilities or collections.
- To prevent fires, tape battery terminals and place lithium-ion batteries in separate plastic bags.

Button or button cell batteries are also known as coin batteries. These small, round batteries have historically contained silver, cadmium, mercury, or other heavy metals as their main component. Today, the majority are made of lithium metal. These batteries are commonly used in products such as watches, hearing aids, car keyless entry remotes, medical devices, and calculators. Keep all batteries out of the reach of children, but especially button batteries. Because they are shiny and small, these batteries are attractive to kids. Button batteries can be easily swallowed and cause medical problems and even death. Place each battery in

separate plastic bags or place non-conductive tape (e.g., electrical tape) over the battery's terminals or around the entire button. A lithium battery may spark and cause fires if damaged or the terminal ends touch. If the battery becomes damaged, contact the manufacturer for specific handling information. Check for the word "lithium" marked on the battery. Do not put button-cell, coin, or lithium single-use batteries in the trash or municipal recycling bins. **Take them to an HHW facility or a place with battery recycling such as Home Depot.**

Regular car batteries contain lead and acid, so they cannot be put in the trash or taken to landfills. Lead-acid batteries may contain up to 18 pounds of lead and about one gallon of corrosive lead-contaminated sulfuric acid. They can be used as either an engine starting battery or an automotive power battery that moves the vehicle. They can be found in automobiles, boats, snowmobiles, motorcycles, golf carts, all-terrain vehicles, wheelchairs, and other large vehicles. They may also be used in non-automotive situations such as backup power in basement sump-pumps or as uninterruptible power supplies for computers or other critical equipment. Lead-acid batteries also are not accepted at most battery recycling collection sites; however, they can be turned into the Tribe's recycling center. When you buy a new car battery, the store will often take your old battery. Many auto retailers accept old car batteries even if you are not buying a battery. They will dispose of them properly.

In General: If it is not an alkaline, rechargeable alkaline, or zinc carbon battery, it needs to be taped, bagged separately, and taken to a battery recycling drop-off like Home Depot or taken to an HHW facility that takes batteries unless it is a regular lead-acid car battery which can be turned in when you buy a new automotive battery or brought to the Tribe's recycling facility or Pacific Steel in Lewiston.

Plug-in and electric vehicle car batteries: Most of today's plug-in and hybrid electric vehicles and energy storage (on and off-grid) use lithium-ion (Li-ion) batteries to either store power for the hybrid system or to power the electric motor that moves the vehicle. These batteries are also used for energy storage systems installed in buildings. Because of the size and complexity of these battery systems, medium and large-scale Li-ion batteries may not be able to be removed by the

consumer. Refer to the manufacturer's instructions and heed warnings and safety instructions.

- Automobile: Contact the automobile dealer, shop, or salvage yard where the battery was purchased.
- Energy Storage: Contact the energy storage equipment manufacturer or company that installed the battery.

'apaqa'ánno' 'ee kaa 'epeqíicxnu' wéetesne

- Respect and take care of the earth.

Appendices

Santee Sioux Nation Office of Environmental Protection

Guide to Hazardous Household Cleaning Products and Less Toxic Alternatives

Table of Contents

Introduction

During a typical day in an American home, levels of chemicals in the indoor air can be hundreds or even thousand times higher than the outdoor air in the most polluted cities. In fact, indoor air pollution levels would be high enough to trigger an inspection by state or federal agencies in any workplace settings. Many of the chemicals in household products are similar in nature to those that are used in industrial settings. These dangerous chemicals can cause minor to serious and even life-threatening health problems. However, most household cleaning products and pesticides are reasonably safe when used as directed by the label.

Prior to WWII most households used relatively safe ingredients for cleaning that were commonly found in the home. With the rapid increase of petroleum-based chemicals after the war, corporations began to manufacture ready-made cleaning products. Today, most people are accustomed to buying a wide range of ready-made products that are custom designed for many surfaces, materials and rooms in their house.

Cleaning can be easily handled using less toxic products. Everyday ingredients like baking soda, vinegar, salt, lemon juice, vegetable oil, soap, borax, and hydrogen peroxide can do the same type of cleaning as commercial products. Because of consumer demand, many companies are looking at ways to make less toxic cleaning products.

This guide will explore the various common hazardous ingredients in cleaning products as well as give options for less toxic cleaning products.

Common Hazardous Ingredients in Cleaning Products

Acetone - A neurotoxin, acetone may cause liver and kidney damage, and damage to the developing fetus. It is a skin and eye irritant. Found in spot treatment cleaners, mark and scuff removers, and other products.

Aerosol products- Aerosol propellants may contain propane, formaldehyde, a carcinogen, neurotoxin and central nervous system depressant, methylene chloride, a carcinogen, neurotoxin and reproductive toxin, and nitrous oxide. Products applied with aerosol sprays are broken into minute particles, which can be more deeply inhaled than larger particles, which may increase their toxic effect.

Ammonia - Undiluted, ammonia is a severe eye and respiratory irritant that can cause severe burning pain, and corrosive damage including chemical burns, cataracts and corneal damage. It can also cause kidney and liver damage. Repeated or prolonged exposure to vapors can result in bronchitis and pneumonia. Found in a wide range of cleaning products. Ammonia will react with bleach to form poisonous chlorine gas that can cause burning and watering of eyes, as well as burning of the nose and mouth.

Diethanolamine (DEA) - Listed as a suspected carcinogen by the State of California, this chemical is a skin and respiratory toxicant and a severe eye irritant. Used in a wide range of household cleaning products.

D-limonene - This chemical is produced by cold-pressing orange peels. The extracted oil is 90% d-limonene. It is a sensitizer, a neurotoxin, a moderate eye and skin irritant, and can trigger respiratory distress when vapors are inhaled by some sensitive individuals. There is some evidence of carcinogenicity. D-limonene is the active ingredient in some insecticides. It is used as a solvent in many all-purpose cleaning products, especially 'citrus' and 'orange' cleaners. Also listed on labels as citrus oil and orange oil.

Ethoxylated nonyl phenol - Nonyl phenols are hormone disruptors and some contain traces of ethylene oxide, a known human carcinogen. They are eye and skin irritants. Used in laundry detergents and other cleaning products.

Formaldehyde - In lab tests, formaldehyde has caused cancer and damaged DNA. Formaldehyde is also a sensitizer, with the potential to cause asthma. Several laboratory studies have shown it to be a central nervous system depressant. Exposure to formaldehyde may cause joint pain, depression, headaches, chest pains, ear infections, chronic fatigue, dizziness and loss of sleep. While formaldehyde naturally occurs in the human body in minute amounts, it is estimated that 20 per cent of people exposed to it will experience an allergic reaction. Used in a wide range of products, including some furniture polishes. Formaldehyde may be released by other chemicals.

Fragrance - Fragrance on a label can indicate the presence of up to 4,000 separate ingredients, most of which are synthetic. Many compounds in fragrance are human toxins and suspected or proven carcinogens. In 1989, the US National Institute of Occupational Safety and Health evaluated 2,983 fragrance chemicals for health effects. They identified 884 of them as toxic substances. Synthetic fragrances are known to trigger asthma attacks. The US Environmental Protection Agency found that 100% of perfumes contain toluene, which can cause liver, kidney and brain damage as well as damage to a developing fetus. Symptoms reported to the FDA from fragrance exposure have included headaches, dizziness, rashes, skin discoloration, violent coughing and vomiting, and allergic skin irritation. Clinical observations by medical doctors have shown that exposure to fragrances can affect the central nervous system, causing depression, hyperactivity, irritability, inability to cope, and other behavioral changes. Fragrance is a common skin irritant.

Methylene chloride - Methylene chloride is a carcinogen, a neurotoxin and a reproductive toxin. On inhalation, it can cause liver and brain damage, irregular heartbeat, and even heart attack. It is a severe skin and moderate eye irritant. Used in stain removers.

Monoethanolamine - This chemical may cause liver, kidney and reproductive damage, as well as depression of the central nervous system. Inhalation of high concentrations - when cleaning an oven for example - can cause dizziness or even coma. The chemical can also be absorbed through the skin. It is a moderate skin irritant, and a severe eye irritant. Found in many cleaning products, including oven cleaners, tub and tile cleaners, laundry pre-soaks, floor strippers and carpet cleaners.

Morpholine - This corrosive ingredient can severely irritate and burn skin and eyes, and can even cause blindness if splashed in eyes. It can cause liver and kidney damage, and long-term exposure can result in bronchitis. It reacts with nitrites (added as a preservative in some products, or present as a contaminant) to form carcinogenic nitrosomines. Morpholine is a moderate to severe eye, skin and mucous membrane irritant. Used as a solvent in a number of cleaning products, including some furniture polishes and abrasive cleansers.

Naphthalene - This registered pesticide is listed as a suspected carcinogen in California and is most commonly found in mothballs, and some other pest repellants, as well as in deodorizers. As a reproductive toxin, it is transported across the placenta and can cause blood damage. It can cause liver and kidney damage, and corneal damage and cataracts. Skin exposure is especially dangerous to newborns.

Parabens - Parabens are hormone disruptors. Widely used in cleaning products as preservatives, paraben is usually preceded by the prefixes methyl-, ethyl-, butyl-, or propyl. Parabens may cause contact dermatitis

Paradichlorobenzene - This highly volatile registered pesticide is in the same chemical class as DDT. It is a suspected carcinogen, and may cause lung, liver and kidney damage. It is used in mothballs and some washroom deodorizers and urinal blocks.

Phosphoric acid - Extremely corrosive, it can severely irritate and burn the skin and eyes. Breathing vapors can make the lungs ache, and it may be toxic to the central nervous system. Found in some liquid dishwasher detergents, metal polishes, some disinfectants, and bathroom cleaners, especially those that remove lime and mildew.

Sodium dichloroisocyanurate dihydrate - This corrosive chemical is a severe eye, skin and respiratory irritant. It may cause liver and gastrointestinal damage, and may be toxic to the central nervous system. It will react with bleach to form poisonous chlorine gas that can cause burning and watering of eyes, as well as burning of the nose and mouth. It is found in some toilet bowl cleaners and deodorizers, as well as industrial detergents and some institutional dishwashing detergents.

Sodium hypochlorite (bleach) - A corrosive chemical, sodium hypochlorite is an eye, skin and respiratory irritant, as well as a sensitizer. It is especially hazardous to people with heart conditions or asthma, and can be fatal if swallowed. It may be a neurotoxin and toxic to the liver. Found in a wide range of household cleaners.

Sodium Lauryl Sulfate - Sodium lauryl sulfate (SLS) is used as a lathering agent. This chemical is a known skin irritant. It also enhances the allergic response to other toxins and allergens. The U.S. government has warned manufacturers of unacceptable levels of dioxin formation in some products containing this ingredient. SLS can react with other ingredients to form cancer-causing nitrosamines

Toluene - Exposure to toluene may cause liver, kidney and brain damage. It is also a reproductive toxin which can damage a developing fetus.

Turpentine - This chemical can cause allergic sensitization, and kidney, bladder and central nervous system damage. It is an eye irritant. Found in specialty solvent cleaners,

Less-Toxic Household Cleaning Products

Air Freshener, Deodorizer, Odor Remover

Far from freshening air, chemical-based air fresheners and deodorizers add dangerous chemicals to the air we breathe. Air fresheners work by using a nerve-deadening chemical that interferes with our sense of smell, by coating nasal passage with an oily film, by masking an offending odor with a different odor, or by deactivating the odor.
Air fresheners are made from a number of chemicals including formaldehyde, a carcinogen and sensitizer, naphthalene, a suspected carcinogen, xylene, a neurotoxin and possible reproductive toxin, butane gas, a neurotoxin, cresol, ethanol, phenol and strong fragrances. Some solid deodorizers include the pesticide paradichlorobenzene, a carcinogen which can also cause liver and kidney damage. Aerosol air fresheners release chemicals as tiny particles which can be inhaled deeply into lungs and transferred into the blood stream. Plug in air fresheners break chemicals into even smaller particles.
The key to freshening air is to remove or dilute the offending odor (by cleaning, ventilation or absorption), not to cover it with another chemical.

Less-toxic Alternatives

- Watch Your Ozone
  Don't use air fresheners advertised as pine- or lemon-scented, especially during high outdoor pollution days.
- For ozone forecasts, visit Air Now . This is a great government sponsored website all about air quality.
- When using cleaning products, avoid the use of indoor air cleaning devices such as electrostatic precipitators and ionizers that can emit ozone.
- Remove bad odors instead of masking them; Open windows.
- Clean the source of the odor with non-toxic products.
- Empty the garbage frequently.
- Burn 100 percent pure beeswax candles with 100 percent cotton wicks—they purify and clean the air.
- Use an open box of baking soda for smelly rooms.
- Use indoor plants to clear carbon dioxide and other toxins.
- Use green tea to refresh your home.
- Perfume the air with natural scents.
- Simmer cinnamon and cloves, fresh ginger, or herbs in water on the stovetop.
- Simmer water with a drop or two of your favorite pure essential oil.
- Use organic sachets and potpourris.
- Try these other homemade Home Sweeteners.

All-Purpose Cleaner

Cleaners may contain ammonia, a strong irritant which can also cause kidney and liver damage, butyl cellusolve which is neurotoxic and rapidly penetrates skin, and ortho phenylphenol which is a severe eye and skin irritant. Many all-purpose cleaners contain DEA and TEA which can react with nitrites (added as undisclosed preservatives or present as contaminants) to form carcinogenic nitrosamines which readily penetrate the skin. Many colored products are made with carcinogenic coal tar colors. Hormone disrupting parabens may be used as preservatives. Many cleaners also include fragrances and detergents. Alternative brands may contain d-limonene, a sensitizer which can also cause respiratory distress as well as liver, kidney and nervous system damage. D-limonene is a hazardous substance, although it is derived from a natural source.

Less-toxic Alternatives

Home-made Alternatives

Multipurpose Cleaner
4 tablespoons baking soda
1 quart warm water

How to use: Pour solution on a clean sponge and wipe

Tips

Microfiber cloths are a new addition to the world of cleaning which can significantly reduce use of chemical cleaning agents. These untreated, reusable cloths are made of polyester and polyamide, spun into tiny wedge shaped strands, 100 times finer than a human hair. They can lift off dirt, grease and dust without the need for cleaning chemicals, because they are formulated to penetrate and trap dirt. There are a number of different brands. A good quality cloth can last for several years.

Bleach

The main ingredient in chlorine bleach is sodium hypochlorite (chlorine added to lye.) Chlorine is toxic as a skin irritant, and by inhalation. Sodium hypochlorite can create poisonous chlorine gas if mixed with ammonia (which may be an unlabeled ingredient in some cleaning products) or with vinegar. Workplace safety data sheets warn that sodium hypochlorite may be a neurotoxin and cause liver damage. People with chemical sensitivities report adverse reactions to minute quantities of chlorine. Sodium hypochlorite readily combines with organic matter to form organochlorines which are highly toxic to aquatic life.

Less-toxic Alternatives

- Hydrogen peroxide - drug store dilution. Use 1/2 cup per wash load.
- Oxiclean - oxygen bleach
- Simply Clean - Oxygen bleach

Home-made Alternatives

- 3/4 cup 3% hydrogen peroxide
- 1/4 cup lemon juice
- 1 Tbsp. citric acid (optional– whitens clothes natural and helps to soften water, making this more effective in hard water)
- distilled water to fill
- 20 drops lemon essential oil

amber 1/2 gallon glass jug

DIRECTIONS

- Pour hydrogen peroxide, lemon juice, citric acid (if using), and lemon essential oil into an amber glass bottle. Swish around until citric acid is dissolved.
- Fill the rest of the jug with distilled water and use as you would bleach.

Tips

- Sunshine will whiten cotton and linen.
- Never combine chlorine bleach with ammonia or vinegar. Extremely toxic fumes will be produced.

Dishwashing Liquid (Hand)

Most dishwashing liquids contain detergents, coal tar based colours, and artificial fragrance. They may contain Quarternium 15, an eye and skin irritant which can release carcinogenic formaldehyde. If the label says "Do not use with chlorine bleach", then the product probably contains ammonia. Many dyes are known to be carcinogenic; they can penetrate the skin and be deposited on dishes. Conventional detergents are petroleum-based.

Home-made Alternatives

Ingredients:

1/2 cup Castile Liquid Soap
1/2 cup water (distilled or boiled)
1 Tbsp vitamin E oil
1 Tbsp nourishing oil (sweet almond or jojoba oil)
5-10 drops essential oils

Instructions:

1. In a mason jar or soap dispenser, add water first (to prevent bubbles) then add the liquid castile soap, followed by the oils. Shake ingredients together.
2. Shake the soap dispenser before using, then squirt a small amount on your hands as needed, rinsing with water.

Less-toxic Alternatives

Dishwasher Detergents

Many dishwasher detergents contain dry chlorine which is activated when dissolved in water. Chlorine fumes in the steam that leaks from dishwashers may cause eye irritation and difficulty breathing. Dishwasher detergents may also contain quarternium 15, an eye and skin irritant and an allergen which can release carcinogenic formaldehyde. Dyes and artificial fragrances are common ingredients.

Less-toxic Alternatives

Home-made Alternatives

Ingredients:

1 1/2 cups citric acid
1 1/2 cups washing soda
1/2 cup baking soda
1/2 cup sea salt

Directions:

Mix to combine. Use 1 Tbsp. per load.

Disinfectant

It's doubtful whether disinfectants are needed at all for most household uses. Ordinary cleanliness is sufficient to eliminate hazardous bacteria. Soap, water and rubbing (the old "wash your hands" requirement) is the best method to prevent disease. The fad for disinfectants and anti-bacterials is based on a false fear of germs. Homes do not require the same types of cleaning as hospitals, where disease and infection is common.
Besides being a waste of money, some brands of disinfectants use highly caustic chemicals like sodium hydroxide, sodium hypochlorite and phosphoric acid that can burn eyes and skin. Breathing vapors can burn lungs. Disinfectants may also contain phenols which can damage DNA as well as the liver, kidney and nervous systems, cresol, a suspected carcinogen and respiratory toxin, formaldehyde, a carcinogen, sensitizer and suspected central nervous system depressant, chlorine, a lung irritant, and alcohol. There are more than 300 different active ingredients approved for use in anti-microbial products, ingredients classified by the EPA as pesticides, because they kill microbes. In the Journal of Emerging Infectious Diseases, Dr. Elaine Larson wrote that because of potential health risks, antibacterial agents and disinfectants should be reserved for hospitals and home care of patients with suppressed immune systems.
Scientists are also concerned that products containing antibacterial and anti-microbial agents kill beneficial bacteria and contribute to the creation of antibiotic-resistant bacteria. Not all bacteria will be killed by antibacterial agents. The surviving bacteria are resistant to antibiotics and go on to produce new generations of resistant bacteria. Triclosan, one of the most popular antibacterial agents, creates dioxin, a carcinogen, as a by-product. Triclosan is a derivative of 2,4-D, an herbicide. There is concern that use of antibacterial products may affect human health.

Less-toxic Alternatives

- Alcohol
- Hydrogen peroxide - drugstore dilution. Use undiluted..

Home-made Alternatives

Ingredients:
2 cups water
20 drops of tea tree oil
2 Tbsp. white vinegar
1/s tsp. liquid dish soap
Directions:
Mix all ingredients together in a spray bottle. Shake well.

Drain Opener

Drain cleaners usually contain sodium hydroxide and sodium hypochlorite, which can cause permanent damage to skin and eyes on contact. Vapors can burn lungs. These chemicals are often mixed with ammonia or volatile petroleum distillates. Drain cleaners may also contain dimethylbenzyl ammonium chloride, a severe eye and skin irritant, and dichlorodifluromethane, an eye irritant which is also neurotoxic. Drain cleaners may be fatal if ingested. Biological products containing stabilized enzymes and bacteria are less toxic, equally effective and more environmentally friendly.

Less-toxic Alternatives

- Citra-Drain - contains d-limonene
- Earth Enzymes Drain Opener - available at health food stores
- TSP

Home-made Alternatives

Drain Cleaner

1/2 cup baking soda
1/2 cup white vinegar
Boiling water

Pour baking soda down drain. Add white vinegar and cover drain, if possible. Let sit for 5 minutes, then pour a kettle of boiling water down drain. (The vinegar and baking soda break down fatty acids, allowing the clog to wash down the drain.) This method can be used weekly to help prevent drain clogs. Do not use this method if you have used a commercial drain opener and it may still be present in the drain.

Drain Opener

Use a plunger. It may take a number of plunges to unclog the drain. Do not use this method if you have used a commercial drain opener as it may still be present in the drain.

Drain Cleaner and Opener

Use a flexible metal snake. It is usually more effective than chemical drain openers. The mechanical snake may be purchased or rented. Thread it down the clogged drain to push away obstruction.

Fabric Softener

Fabric softeners are designed to reduce static in synthetic fabrics. They serve no purpose with natural fabrics. Fabric softeners may contain quarternary ammonium compounds (quats) and imidazolidinyl, both of which are known formaldehyde releasers. For about 5% of people, quats are an extreme sensitizer. They may cause a variety of asthma-like symptoms, including respiratory arrest. Exposure to formaldehyde can cause joint pain, depression, headaches, chronic fatigue and a variety of other symptoms. In lab tests formaldehyde has caused cancer and damaged DNA. Both quaternium and imidazolidinyl can cause contact dermatitis. Fabric softeners work by leaving a residue on the fabric which never completely washes out. It can cause allergic reactions through skin contact and inhalation. Fabric softeners may also contain carcinogenic coal-tar dyes, ammonia and very strong scents. When fabric softeners are exposed to hot water, heat from dryers or ironing, vapors may be emitted which can be deeply inhaled, increasing their impact.

Less-toxic Alternatives

- Because conventional fabric softeners contain so many harmful chemicals, even if they are free of added scents, they are not a good choice for less-toxic living.

Home-made Alternatives

Add 1/2 cup of white vinegar or baking soda to the rinse cycle to soften water and reduce static cling.

Laundry discs or balls (reusable) soften water and help reduce static cling.

A ball of aluminum foil in the dryer can reduce static cling without adding chemicals.

You may be able to dramatically reduce your use of fabric softener and still get the desired effect. One person reports she puts a dab of liquid softener on a damp washcloth, places it in her dryer and reuses the same washcloth for many loads without adding more softener. One bottle of softener lasts her years.

Tips

To reduce static in synthetics, run dryer on “air dry” or “no heat” setting when laundry is almost dry, then hang clothes up until completely dry. This will also reduce the need for ironing.

Floor Cleaner, Wax, Polish

Conventional products often contain mineral spirits and petroleum solvents, both of which are neurotoxic and can cause severe eye and skin irritation as well as Stoddard solvent which is also neurotoxic. Petroleum solvents may contain traces of carcinogenic benzene. Some wax removers with ammonia contain tripropylene glycol monomethyl ether which can cause narcosis and kidney injury with repeated and prolonged skin exposure.

Less-toxic Alternatives

- Microfibre mop - use with plain water (Expensive but a real revolution in mop technology. Rinses cleaner than other mop heads and saves money by eliminating cleaning products. Safe for hardwood floors.)
- Nature Clean - Natural Floor Cleaner
- TSP (trisodium phosphate) can be used to eliminate built up dirt and grime. Use with care, it can dull or remove finishes on wood.

Home-made Alternatives

Floor Cleaner

Add 1 cup of vinegar to a pail of water.

Stronger Floor Cleaner

1/4 cup washing soda
1 tablespoon liquid castille soap
1/4 cup vinegar
8 litres hot water
Mix well to dissolve washing soda

Wood Floor Cleaner

1/4 cup liquid castille soap
1/2 to 1 cup vinegar
8 litres warm water

Wood Floor Polish I

1/8 cup olive oil or other vegetable oil
1 tablespoon vinegar
1 tablespoon vodka

Wood Floor Oil Polish II

Rub with olive oil.

Wood Floor Wax

1 cup olive, almond or walnut oil
1/2 cup vodka
30 - 40 grams grated beeswax
40 - 55 grams carnauba wax (depends on hardness desired).
Put oil and the waxes into a wide-mouth glass jar or tin can and set in pot of simmering water. Stir gently until waxes are dissolved. Remove from heat and add vodka, mixing well. Allow to harden. Use a rag to rub into the wood. If the rag "drags" too much, dip it into a tiny bit of oil.

Floor and Furniture Polish

Floor and furniture polishes can contain nitrobenzene, a carcinogen, reproductive toxin and central nervous system toxicant which can be absorbed through the skin, phenol, a carcinogen and severe skin irritant, as well as propane, butane gas, aliphatic naptha, petroleum distillates, white mineral oil and turpentine which are all neurotoxins, and may also be eye or skin irritants. Polishes may contain morpholine, a severe irritant which may cause kidney damage, as well as ammonia, detergents, and synthetic fragrance, Aerosol products create microscopic particles that can be inhaled deeply into lungs and transferred to the bloodstream. Some products contain carcinogenic formaldehyde and nitrosamines.

Less-toxic Alternatives

Home-made Alternatives

Polish with plain olive oil, almond or walnut oil.

Polish with food grade mineral oil. Although it is petroleum based it is non-volatile and relatively safe. Available in drug stores.

Furniture Polish

1 cup olive oil, almond or walnut oil

1/2 cup vinegar or lemon juice

Shake well and apply a small amount to a soft rag. Spread evenly over furniture surface. Polish with a dry cloth

Laundry Detergent

Most detergents are derived from petrochemical ingredients. They may contain bleaches, synthetic whiteners, and chemical fragrances, even in some so-called "fragrance free" brands. Some detergents may contain ammonia, ethanol, napthalene and phenol. Many liquid brands contain ethoxylated alcohols which can be contaminated with carcinogenic 1,4-dioxane. Detergent residues on clothes and bed linens can be a source of skin irritation, and lingering scents from scented products can cause respiratory and other reactions in both the user and others. Petroleum-based detergents cause more household poisonings than any other household product, (when eaten by children.) Laundry soaps, available as bar soaps or flakes, are usually made from natural minerals and fats and tend to be less toxic than conventional detergents.

Less Toxic Alternatives

Home-made Alternatives

Laundry Whitener

Add up to 1/2 cup of Arm & Hammer Washing Soda to washer.

Laundry Detergent

6 cups washing soda (Arm & Hammer Washing Soda)
3 bars of 4.5-5 ounce soap, finely grated (One made with coconut oil is the best)
Optional– lemon essential oil
Directions:

1. Cut soap into small chunks. Add to blender or food processer along with washing soda.
2. Blend until a fine powder.
3. Pour into clean container (keep the essential oil next to container and add 5 drops with each load).

To use:
Add 2-3 Tbsp per load
If washing whites, add 1/2 cup of hydrogen peroxide in the bleach compartment.
Add 1/2 cup vinegar to the fabric softener compartment.

Mold and Mildew Cleaners

Mold and mildew cleaners can contain formaldehyde, a carcinogen and sensitizer, phenol, kerosene, pentachlorophenol,chlorine and fungicides. The Environmental Protection Agency has classified more than 300 different active ingredients found in antimicrobial products including mold and mildew cleaners as pesticides. Although labels often warn that these cleaners can be hazardous as eye irritants, they are often sold as aerosol sprays, creating fine mists which can be deeply inhaled or contact eyes. See also, anti -bacterials

Less-toxic Alternatives

Hydrogen peroxide - drug store dilution. Apply full strength.

Home-made Alternatives

Strong All-Purpose Cleaner

2 teaspoon tea tree oil
2 cups water
Combine in a spray bottle, shake to blend, and spray on problem areas. Do not rinse. Makes two cups.

Tips

- Vinegar Spray- straight vinegar reportedly kills 82% of mold. Pour some white distilled vinegar straight into a spray bottle, spray on the moldy area, and let set without rinsing. Smell will dissipate in a few hours.
- Ultra-violet light (blue bulb) will kill mold.
- Wash with very strong black tea and let dry.

Oven Cleaner

Conventional oven cleaners create toxic fumes that can burn eyes, skin and internal organs. Lye and ammonia are often the cleaning agents and they are especially dangerous in aerosols.

Less-toxic Alternatives

Home-made Alternatives

Oven Cleaner I
1 cup or more baking soda
A squirt or two of liquid soap

Sprinkle water generously over the bottom of the oven, then cover the grime with enough baking soda that the surface is totally white. Sprinkle some more water over the top, let sit overnight. Wipe up the next morning. When the worst of the mess is removed, dab a bit of liquid detergent or soap on a sponge and wash the remaining residue from the oven.

(*If this recipe doesn't work for you it is probably because you didn't use enough baking soda and/or water.)*

Make a paste of baking soda and water and spread on oven interior. Leave overnight with oven door closed. Remove with sponge or nylon scrub pad. SOS pad can be used to remove stubborn bits.

Tips
While oven is still warm, sprinkle water on the spill, then sprinkle salt on it. When the oven cools down, scrape the spill away and wash the area.

Toilet Bowl Cleaner and Deodorizer

Many toilet bowl cleaners are often highly caustic and form toxic gases when mixed with water. They can contain ammonium chloride, a corrosive, 1,4-dichlorobenzine, a carcinogenic pesticide which can cause liver and kidney damage, hydrochloric acid, whose vapors can cause coughing and breathing difficulties, and sodium dichloroisocyanurate dihydrate which is a severe eye, skin and respiratory irritant, which can form carcinogenic chlorine gas. Sulfate-based products containing sodium sulfate or sodium bisulfate may cause asthmatic attacks.

Less-toxic Alternatives

- Hydrogen peroxide - drug store dilution

Home-made Alternatives

To remove mineral buildup, put 1-2 denture cleaner tablets in bowl and let sit overnight, then clean .

Pour one can of Coke in toilet.

Use undiluted white vinegar to scrub the inside of the toilet bowl. First dump a bucket of water into the toilet to force water out of the bowl and allow access to the sides. Pour undiluted white vinegar around the bowl and scrub with a toilet brush to remove lime, stains and odor.

Copper and Brass Cleaner

Many commercial brass and copper cleaning products contain formaldehyde and other harsh chemical ingredients that release harmful fumes known to irritate respiratory systems. The gases released from these products are VOC's which can trigger asthma attacks and allergic reactions.

Less-toxic Alternatives

Home-made Alternatives

Lemon juice
Salt, non-iodized
Cornstarch

Directions:
Mix equal parts of salt and cornstarch with lemon juice to make a paste. Apply to surface with soft rag. Rub gently. Rinse with warm water and mild dish soap. Dry with a soft cloth.

Tips
Not for use on lacquered finishes.

Fragrant Kitchen Cleaner

Kitchen cleaners contain many toxic chemicals that are harmful to you and the environment. Many cleaners contain allergens and irritants that cause respiratory system damage or irritant.

Less-toxic Alternatives

Home-made Alternatives

Ingredients:
2 TBSP. White vinegar
2 pints water
4 drops essential oils

Direction:
Combine all ingredients in a spray bottle and use as a final rinse after cleaning surfaces. Store in a cool, dark place.

Garbage Can Deodorizer

Many deodorizers contain VOC's that can trigger asthma attacks and allergic reactions. Garbage can deodorizers fall into the same category as air fresheners. See air fresheners to understand the harmful chemicals they contain.

Less-toxic Alternatives

Home-made Alternatives

Ingredients:
1 cup baking soda
1 tsp. tea tree oil

Directions:
Mix together in a small bowl, working out all the lumps with a fork. Sprinkle the mixture in the bottom of the trash can after the liner is removed. Periodically rinse container with white vinegar and dry in the sun.

Garbage Disposal Cleaner

Less-toxic Alternatives

Home-made Alternatives

Ingredients:
1 cup ice
Used lemon or orange rind

Directions:
To eliminate garbage disposal odors and clean and sharpen blades, grind ice and rinds until pulverized.

No-Streak Glass Cleaner

Windex contains ammonium hydroxide which is a known respiratory irritant that can damage eyesight and the skin. It is a moderate concern for asthmatics and for those who suffer from respiratory ailments. Some studies have shown that some chemicals in Windex can cause kidney and liver damage.

Less-toxic Alternatives

Home-made Alternatives

Ingredients:
1/4 cup white vinegar
1 TBSP. cornstarch
2 quarts warm water

Directions:
Mix the ingredients and apply with a sponge or pour into spray bottle and spray on. For lint-free results, wipe dry with crumpled newspaper, buff to a shine.

Laminate Floor Cleaner

See floor cleaner for health effects

Less-toxic Alternatives

Home-made Alternatives

Ingredients:
1/2 cup white vinegar
1 gal. warm water

Direction:
Mix ingredients. Avoid over wetting the floor by using a spray bottle to apply the mixture to the floor. Mop as usual. (microfiber mops work best)

Mirror and Window Polish

See no-streak glass cleaner for health effects.

Less-toxic Alternatives

Home-made Alternatives

Ingredients:
Cornstarch
Water

Directions:
Mix together cornstarch and water to make a paste. Use a soft cloth to apply the paste to the mirror. Rub gently then wipe clean with a soft cloth.

Refrigerator Cleaner

Less-toxic Alternatives

Home-made Alternatives

Ingredients:
2 TBSP. baking soda
1 quart warm water

Directions:
Dissolve baking soda in water. Use to wipe all surfaces inside and out. For stubborn spots, rub with baking soda paste. Be sure to rinse with a clean, wet cloth.

Plumbing Fixture Cleaner #1

Less-toxic Alternatives

Home-made Alternatives

Use to clean stainless steel, chrome, fiberglass, ceramic porcelain or enamel fixtures

Ingredients:
2 TBSP. baking soda
1 quart water

Directions:
Dissolve the baking soda in the water. Wipe on the fixture then rinse.

Plumbing Fixture Cleaner #2

Less-toxic Alternatives

Home-made Alternatives

Hard lime deposits around faucets can be softened for easy removal by covering the deposits with vinegar-soaked paper towels.

Ingredients:
white vinegar
Paper towels

Direction:
Soak paper towels in vinegar and leave them on the surface. Wipe clean after about an hour.

Tub and Tile Cleaner

Less-toxic Alternatives

Home-made Alternatives

Ingredients:
White vinegar
Baking soda or non-iodized salt

Directions:
To remove film buildup on bathtubs, apply vinegar full-strength to a sponge and wipe. Next, use baking soda or salt as you would a scouring powder. Rub with a damp sponge and rinse thoroughly with clean water.

Wood Cleaner

Less-toxic Alternatives

Home-made Alternatives

Ingredients:
2 TBSP. Olive oil
2 TBSP. White vinegar
1/4 cup lemon juice

Directions:
Mix ingredients. Using a soft cloth, rub into wood, in the direction of the grain.

Definitions

Carcinogen – a substance capable of causing cancer in living tissue.

Corrosive – tending to cause corrosion.

DDT – (dichloro-diphenyl-trichloroethane) was developed as the first of the modern synthetic insecticides in the 1940s. It was initially used with great effect to combat malaria, typhus, and the other insect-borne human diseases among both military and civilian populations.

Dioxin - Dioxins are known carcinogens and endocrine disruptors, and people are primarily exposed through consumption of animal and other food products. Babies can be exposed through breast milk. Though dioxin levels have been declining over the last few decades as a result of federal regulatory actions; most people still have significant levels of the chemical in their bodies.

Neurotoxin, neurotoxic - are substances that are poisonous or destructive to nerve tissue.

Nitrosamines - are potent carcinogens which can induce tumor growth in humans. A number of studies have found that nitrosamines play a role in the pathogenesis of gastric and colon cancers.

Sensitizer - are materials that can cause severe skin and/or respiratory responses in a sensitized worker after exposure to a very small amount of the material. Sensitization develops over time. When a worker is first exposed to a sensitizer, there may be no obvious reaction.

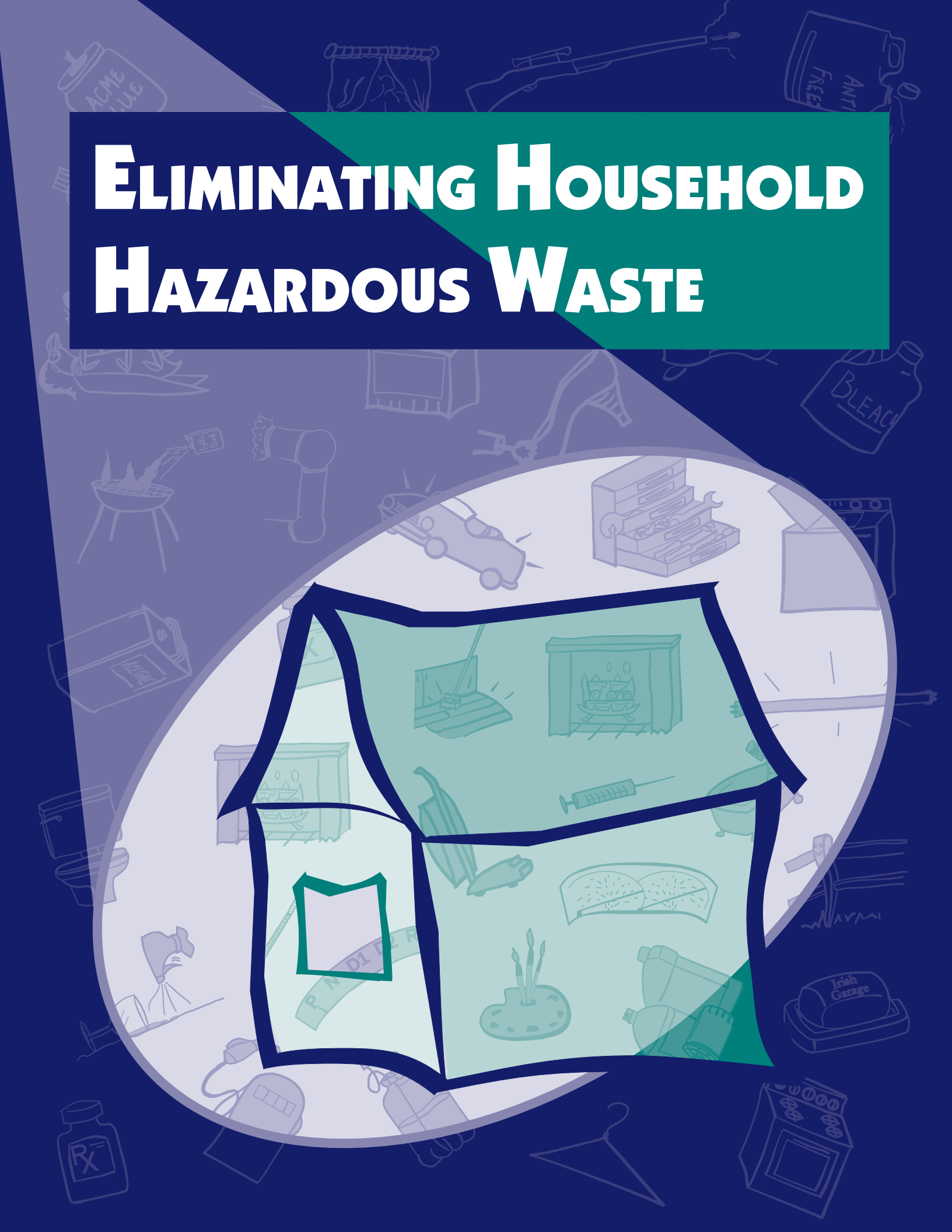
Synthetic - noting or pertaining to compounds formed through a chemical process by human agency, as opposed to those of natural origin.

VOC - Volatile Organic Compound– are emitted as gases from certain solid and liquids. They include a variety of chemicals, some of which may have short– and long-term adverse health effects.

Created by: Page Hingst, Tribal Response Coordinator-Santee Sioux Nation of Nebraska

Eliminating Household Hazardous Waste – Idaho Department of Environmental Quality

Eliminating Household Hazardous Waste



Read Labels - Look for Signal Words

	Signal word	Meaning
Most Dangerous	Poison	highly toxic
↓	Danger	extremely flammable, corrosive, or highly toxic
	Warning	mid/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 Idaho Poison Control Center

1-800-860-0620 toll-free

For all other emergencies:

Call 911

Acknowledgments:

The Idaho Division of Environmental Quality and the other cooperators in this publication, would like to thank the Oregon Department of Environmental Quality and Portland METRO for permission to use and modify information in their publication, T*he Hazardous Home Handbook.*

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. While all due effort has been made to assure accuracy, the Idaho Division of Environmental Quality and the publication cooperators do not 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.

Table of Contents

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 think 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 cautions 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 or readily reacts with other products or chemicals (ie: acids reacting with bases).
- Corrosive/Caustic: Can burn and destroy living tissue.
- Toxic/Poisonous: Capable of causing injury or death through ingestion, inhalation or absorption.
- Radioactive: Can damage or destroy cells and chromosomal material.

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 booklet.

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, even though the product itself is not labeled as hazardous. It is not always easy to know which products these are. Generally, products that can be inhaled or absorbed through the skin are most likely to 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. They generally lose their effectiveness after two years, and old pesticides often 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 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 booklet 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 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. Many pesticides should not be stored where they may freeze (i.e. unheated garage or shed). Follow the recommendations on product labels and in this booklet.

Additional precautions

Avoid wearing soft contact lenses when working with hazardous products. They can absorb vapors and trap them against the eyes. 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. Post the number of the Idaho Poison Control Center by your telephone. The toll-free number is 1-800-860-0620

Practice Safe Disposal

If you have unwanted hazardous products that you are not able to give away, dispose of them responsibly. With permission from your local landfill or wastewater treatment plant, some household hazardous wastes can be safely disposed in the garbage or diluted and flushed down an inside drain. But many products should be taken to a household hazardous waste collection site. For information about collections sites call your local government solid waste department.

Properly prepare household hazardous wastes for transport to the 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 leakproof container.
- Pack containers is sturdy boxes in the trunk of your vehicle, away from the driver, passengers and pets.

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 households products.

A glossary and a reference section containing contact information for the Idaho Division of Environmental Quality regional offices, local government household hazardous waste collection programs, District Health Departments, Landfills, University of Idaho-County Cooperative Extension Offices, and other resources are located in the back of the booklet.

Some disposal options recommended in this booklet 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 Idaho.

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

Hazardous ingredients:
acetates (ethyl, amyl, butyl), acetone, butadiene methyl styrene latex, cyanoacrylate, epoxy resins, formaldehyde, hexane, methly ethyl ketone, methyl isobutyl ketone, petroleum naphtha phthalates, plyamide resin, polyvinyl alcohol, toluene (toluol), trichloroethane, xylene (xylol)

Potential hazards:
Solvent-based glues are the most hazardous type and can be recognized by the words "flammable," "combustible" or "contains petroleum distillates" on the product 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.

Use and storage:
Use white glue, glue sticks or yellow glue whenever possible. These are the least toxic adhesives available. Most other adhesives and glues contain solvents. For adhesives or glues containing solvents, use a nonaerosol 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.

2nd Best: Uncap instant, white or yellow glue and allow to harden in container. Dispose of solid glue and container in the garbage.

3rd Best: Hold for a household hazardous waste collection. Call local government solid waste department for information.

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 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

Hazardous ingredients:
methylene chloride, nitrous oxide, o-phenylphenol, propane, trichloroethane, trichlorethylene

Potential hazards:
Containers may explode if heated. Contents may be highly flammable, irritants, corrosives, toxins or poisons.

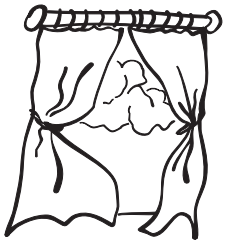
Use and storage:
Use in a well-ventilated area (preferable outdoors) and follow label instructions. Avoid breathing vapors. NEVER burn aerosol cans or place them in a trash compactor, even completely empty cans. Prevent nozzles from becoming clogged. Give the spray button a quarter turn before spraying. 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 form sources of heat or flames.

Disposal:
Best: Use up or give away.

2nd Best: Hold for a household hazardous waste collection. Call local government solid waste department for information.

Alternatives:
- Use nonaerosol (pump-spray, roll-on or liquid) products.

Air fresheners/deodorizers



Hazardous ingredients:
formaldehyde, isobutante, methylene chloride, o-phenlyphenol, p-dichlorobenzene, 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.

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.

2nd Best: Hold for a household hazardous waste collection. Call local government solid waste department for information.

3rd 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 eliminate unpleasant cooking odors.
- Simmer cinnamon and cloves.
- Set out herbal bouquets in open dishes.

For a sink garbage disposal:

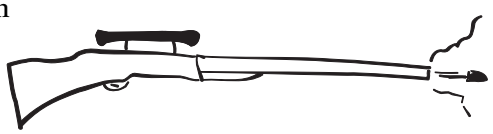
- Grind used lemons in the disposal.
- Pour baking soda into the disposal.

Most air fresheners/deodorizers do not freshen the air at all. Instead, they desensitize your sense of smell, coating your nasal passages with an oily film or mask the unpleasant odor with another odor.

Ammunition

Hazardous ingredients:

gunpowder, primer mechanism



Potential hazards:

Explosive. Flammable. The primary danger associated with ammunition is accidental discharge. The risk is especially great when children view ammunition as something to play with. 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. For maximum safety, separate guns from ammunition and store each in a locked container, cabinet, or drawer.

Disposal:

Contact your local fire department or police department for disposal.

Antifreeze

Hazardous ingredients:

borates, ethylene glycol, sodium nitrite

Potential hazards:

Poisonous when swallowed. Danger to children and pets. Three ounces of antifreeze can kill an adult if swallowed.

Storage:

Follow label directions. Clean up puddles of antifreeze. Animals are attracted by the sweet smell and taste and can be poisoned if they drink it. 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:

Best: Hold for a household hazardous waste collection. Call local government solid waste department for disposal instructions. Do not mix waste antifreeze with used oil!

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

Arts & crafts supplies

Hazardous ingredients:

arsenic, benzene, cadmium, chromium, cobalt, formaldehyde, hexane, lead, methylene chloride, toluene, trichloroethane, silica, uranium

Potential hazards:
Flammable. Respiratory irritants. Toxic.

Storage:
Children under the age of 12 should use only non-toxic art supplies certified by the Arts & Crafts Materials Institute.

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.

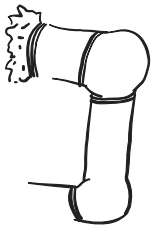
2nd Best: Hold unused supplies for a household hazardous waste collection. Contact local government solid waste department for instructions.

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-mache are standard arts and crafts supplies found in many homes. All of these materials contain chemicals that are hazardous if inhaled, absorbed through the skin or swallowed.

Asbestos

Hazardous ingredients:
Asbestos is the generic name for a group of naturally occurring minerals.



Potential hazards:
Products or materials containing asbestos can release small or invisible mineral fibers into the air when damaged, sawed, drilled, scraped, sanded, broken or demolished. Inhalation of these fibers can cause asbestos-related cancers. These cancers have a 20- to 30-year latency period. Smokers have a higher risk of contracting an asbestos-related disease. Normal dust masks **do not** prevent asbestos fibers form being inhaled.

Potential asbestos problems:
Most products and materials made today do not contain asbestos, and those that could be inhaled are required to be labeled. However, until the 1970's, many types of building products and home insulation contained asbestos. These products were often not labeled. Some common products which contained asbestos in the past and conditions which may release fibers include:

- STEAM PIPES, BOILERS and FURNACE DUCTS insulated with an asbestos blanket or asbestos paper tape. These materials may release fibers if damaged, repaired or removed improperly.
- RESILIENT FLOOR TILES (vinyl asbestos, asphalt and rubber), the backing on VINYL SHEET FLOORING and ADHESIVES used for installing floor tile. Sanding tiles can release fibers, as can scraping or sanding the backing of sheet flooring during removal.
- CEMENT SHEET, MILLBOARD and PAPER used as insulation around furnaces and wood burning stoves. Repairing or removing appliances may release asbestos fibers as may cutting, tearing, sanding, drilling, sawing or shattering insulation.
- DOOR GASKETS in furnaces, wood stoves and coal stoves. Worn seals can release asbestos fibers during use.
- SOUNDPROOFING OR DECORATIVE MATERIAL sprayed on walls and ceilings. Loose, crumbly or water-damaged material may release fibers. So will sanding, drilling, cutting, penetrating or scraping the material.
- PATCHING AND JOINT COMPOUNDS for walls and ceilings and TEXTURED PAINTS. Sanding, scraping, cutting or drilling these surfaces may release asbestos.
- ASBESTOS CEMENT ROOFING, SHINGLES and SIDING. These products are not likely to release asbestos fibers unless sawed, drilled, cut, sanded or shattered.
- ARTIFICIAL ASHES AND EMBERS sold for use in gas-fired fireplaces. Also, other older household products such as FIREPROOF GLOVES, STOVE-TOP PADS, IRONING BOARD COVERS and some HAIR DRYERS.
- AUTOMOBILE BRAKE PADS AND LININGS, CLUTCH FACINGS and GASKETS. Home mechanics may be exposed to asbestos fibers when working on these automotive parts.

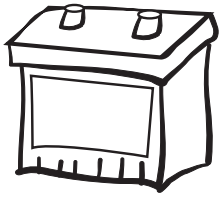
What should be done: Minimize your exposure to asbestos fibers. Locate all suspected asbestos-containing products and materials in your home and deter-

mine what condition they are in. If the product or material is in good condition, leave it alone. If it is damaged, or if you are going to make changes that might disturb the material (such as remodeling), contact the U.S. Environmental Protection Agency at 1-800-424-4EPA, for instructions and educational materials.

Disposal:
Best: Special rules apply for the landfill disposal of waste containing asbestos. For information about packaging and labeling requirements for landfill disposal in Idaho contact the Division of Environmental Quality at 1-208-373-0502 ext. 0173.

Alternative:
- Purchase products and materials that do not contain asbestos.

Batteries, automotive



Commons hazardous ingredients:
lead, sulfuric acid

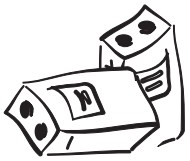
Potential hazards:
Corrosive. Sulfuric acid can cause burns on contact with skin. Harmful to eyes. Irritant if inhaled.

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:
In Idaho, it is illegal to dispose of vehicle batteries in the garbage. Many battery retailers will accept your old battery for recycling. Call your garbage hauler, local government solid waste department or the regional Division of Environmental Quality office in your area, for the battery recycling location nearest you.

Batteries, household

Hazardous ingredients:
cadmium, corrosive electrolytes, lead, lithium, mercury, nickel, silver



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 disc 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.

2nd Best: Hold for a household hazardous waste collection. Call your local government solid waste department for information.

Alternatives:
Use rechargeable batteries when possible.

Bleaches, laundry

Hazardous ingredients:
hydrogen peroxide, oxalic acid, sodium hypochlorite, sodium perborate, sodium percarbonate

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.

2nd Best: Hold larger quantities for a household hazardous waste collection. Call local government solid waste department for information.

3rd 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.

Alternatives:

- Reduce the amount of chlorine bleach needed by half by adding ½ cup baking soda to top-loading machines or ¼ cup to front loaders.
- Use oxygen bleaches or borax, ½ cup per load.
- Hydrogen peroxide, in a standard 3 percent solution, is an oxidizing bleach, safe enough to also use as a medicinal disinfectant.
- Use hydrogen peroxide-based bleaches.

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

Brake fluid

Hazardous ingredients:
methyl, ethyl and butyl ethers or ethylene glycol. Used brake fluid contains lead and other heavy metals.

Potential hazards:
Flammable. Toxic. Harmful or fatal if ingested. Contamination of water and soil 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.

2nd Best: Hold for a household hazardous waste collection. Call local regional Division of Environmental Quality office for disposal and/or recycling information.

Charcoal lighter fluid

Hazardous ingredients:
benzene, naphthalene, petroleum distillates, toluene, xylene

Potential Hazards:
Toxic. Ignitable.

Use and storage:
Use according to label directions. Avoid inhaling vapors or contact with your skin. Do NOT use indoors. Keep container lids 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.

2nd Best: Hold for a household hazardous waste collection. Call local government solid waste department for information.

Alternatives:

- Use an electric charcoal lighter.
- Use a charcoal chimney starter.
- Use a gas grill.

Chemistry sets

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, do not move if crystals have formed. Contact your local fire or police department for disposal.

2nd Best: Hold for a household hazardous waste collection. Call local government solid waste department for information.

Alternative:

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

Cleaners, general household

Hazardous ingredients:
ammonia, chlorinated trisodium phosphate, dichloro (or trichloro) isocyanurate, glycol ethers, phenols, sodium carbonate, sodium hypochlorite, sodium metasilicate

Potential hazards:
Mildly to extremely irritating to skin, eyes, nose and throat. Corrosive if swallowed.

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 container in the garbage.

2nd Best: If your home is connected to a city sewer system, flush small amounts of 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.

3rd Best: Hold large amounts for a household hazardous waste collection. Call local garbage hauler or local government solid waste department for information.

Alternatives:
All-Purpose Cleaner:
- Mix 1 quart warm water, 1 teaspoon liquid soap, 1 teaspoon borax and ¼ cup vinegar.
- Use for many cleaning jobs including counter tops, floors, walls, rugs and upholstery.

For general cleaning:
- Mix vinegar and salt together for a good surface cleaner. Will remove grease if vinegar is at full strength.
- Dissolve 4 tablespoons baking soda in 1 quart warm water.
- For an abrasive cleaner, use baking soda or a nonchlorinated scouring powder.
- Use a mixture of ½ cup vinegar and 1 cup to 1 quart of warm water.
- 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.
- Use soap and water, baking soda and lemon juice.

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 coffeepot 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, pour in 1 cup vinegar and run through as you would water, then run through two posts of water to remove vinegar taste. To keep odor down, use under your kitchen exhaust fan.

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 ½ cup white vinegar or ¼ cup borax 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.

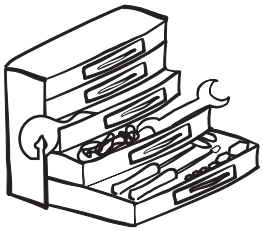
For stains:
- See “Stain/spot removers” listing.
- To remove coffee and other stains on dishware, scrub with baking soda.

For toilets:
- Scrub with a solution of ½ cup borax in 1 gallon of water.

For windows:
- Mix ¼ 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.
- For discolored or stained glass or windows, blend 3 parts dry mustard and 1 part white vinegar into a paste. Apply paste and rub until the discoloration or stain disappears. Rinse well with water. Caution: Avoid eye contact. Dry mustard can be damaging to the cornea.

The average person in the U.S. uses 40.6 pounds of household cleaners each year.

Degreasers, automotive garage



Hazardous ingredients:
carbon tetrachloride, methylene chloride, methyl ethyl ketone, perchlorethylene, toluene, trichlorethylene xylene

Potential hazards:
Flammable. Toxic.

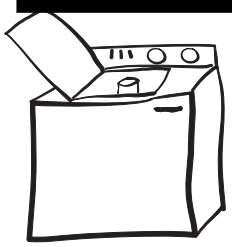
Use and storage:
Use according to label instructions in a well-ventilated area. Keep container lid tightly closed when not in use and store in locked cabinet or out of reach of children and pets.

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

2nd Best: Hold for a household hazardous waste collection. Call local government solid waste department for information on proper disposal. Call local regional Division of Environmental Quality office for recycling options and a recycling directory.

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



Hazardous ingredients:
cationic and anionic detergents, phosphates, sodium carbonate, various surfactants

Potential hazards:
May be harmful if swallowed or cause mild to severe irritation and burns to 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.

2nd Best: Flush household amounts of unwanted liquid detergent down an inside drain with plenty of water. Dispose of unwanted powdered detergents in the garbage. Call local government solid waste department for disposal information.

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 1–2 cups of vinegar to the final Rinse eliminates soap residue. Vinegar also breaks down uric acid. Add 1 cup to Rinse water when washing baby clothes.

Warning: DO NOT use vinegar if using chlorine bleach. It will produce toxic vapors.

Disinfectants

Hazardous ingredients:
ammonia, aromatic hydrocarbons, cationic detergents, formaldehyde, hydrocarbon solvents, lye (sodium or potassium hydroxide), monoethanolamine, phenols, pine oil, quaternary ammonium chlorides,

sodium borate, sodium hypochlorite, triethanolamine

Potential hazards:
Irritant. May be flammable. May be 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.

2nd Best: Hold for a household hazardous waste collection. Call local solid waste department for disposal information.

3rd Best: If on a city sewer system, flush unwanted household amounts down an inside drain (toilet is preferable) with lots of water. If on a septic system, flush very small quantities down an inside drain over several days.

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 ½ cup of baking soda, followed by ½ cup of vinegar, down the drain. Cover drain and let sit 15 minutes. Rinse with 2 quarts of boiling water. A good preventive measure is to give your drains a weekly baking soda and vinegar treatment. It will also keep them smelling fresh.
- Remove the trap and clean out the obstruction with a plunger and/or a plumber's snake.

Fertilizers, chemical

Hazardous ingredients:
ammonium nitrate, ammonium phosphate, ammonium sulfate, 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.

Use:
Read the label instructions before using and follow them carefully when applying. Wear nitrile gloves when handling. Use only moderate amounts of both chemical and organic fertilizers to limit the possibility of water pollution. 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. Look for fertilizers with the word "WIN" on the bag. WIN stands for "water insoluble nitrogen". This is one type of slow release nitrogen. Calculate and apply carefully, no more than 1 pound of actual nitrogen per 1,000 square feet of area per application. Fertilize only as local knowledge or soil tests indicate a need. Lawns usually need fertilizer application in October or November and another in mid to late spring. 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" listing, to prepare and dispose of empty containers.

2nd Best: Unwanted fertilizer that does NOT contain pesticides should be placed in a heavy-duty plastic bag and disposed of in the garbage. If the unwanted fertilizer contains pesticides hold for a household hazardous waste collection. Call local solid waste department for information.

Alternatives:
- 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 pruning, dead leaves, and fruit and vegetable kitchen wastes. For help getting started with composting, contact the University of Idaho Cooperative Extension office in your

county or contact your local government solid waste department (call 1-208-885-7982 for information or see Appendix E).

- 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.
- The most important step to create and maintain a healthy garden is to take very good care of your soil. The University of Idaho Cooperative Extension office in your county can provide you with more information about soil care. To find the nearest extension office in your area call 1-208-885-7982.

Fingernail polish/remover

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.

Use and storage:
Avoid using fingernail polish or remover if you are pregnant.

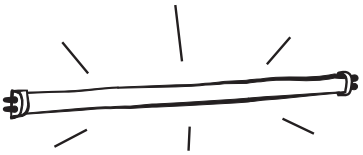
Use according to label instructions. Minimize exposure to vapors by turning on the bathroom exhaust fan and opening a window when using these products and leaving the room after you have applied them. Keep bottles capped when not in use and store away from children.

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

2nd Best: Hold for a household hazardous waste collection. Call local government solid waste department for information.

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



Hazardous ingredients:
mercury, PCBs

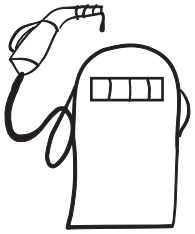
Potential hazards:
Small amounts of metallic mercury are present in most fluorescent light tubes, compact-fluorescent lamps, mercury vapor lights and high intensity discharge lamps (HID). Metallic mercury vapors are harmful if inhaled and pollute the air and water when incinerated or disposed of in unlined landfills. 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:
Best: If the lamp is broken, wear puncture-resistant gloves (such as leather or canvas-dipped) to clean up the glass. Place in a rigid container with a snap-on lid such as a 5 gallon plastic bucket. Take broken or intact fixtures and lamps to a household hazardous waste collection that accepts fluorescent tubes (not all household hazardous waste collections are equipped to accept fluorescent tubes). Contact the regional Division of Environmental Quality office for recycling information and a recycling directory.

2nd Best: Set out fixtures and lamps with the regular garbage. Make sure they are visible to the garbage hauler.

Disposal of ballasts containing PCB:
Best: 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. Hold for a household hazardous waste collection. Contact the local regional Division of Environmental Quality office for information recycling and a recycling directory.

Gasoline



Hazardous ingredients:
benzene, ethylene dichloride, methanol, petroleum, hydrocarbons, tetraethyl lead

Potential hazards:
Ignitable. Highly volatile. Extremely flammable. Explosive. Highly toxic.

Use:
Never smoke around gasoline. Avoid breathing the vapors when fueling your car or lawnmower. 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. Do not use as a cleaner or solvent. Never mix gasoline with waste oil. Always fill your gas powered machines before they become heated by use.

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 (like 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 dangerous pressure levels 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, hot water heaters, and any motor-driven machinery or pilot light 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.

2nd Best: Hold for a household hazardous waste collection. Call local government solid waste department for information.

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

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 nontoxic, 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 and pollution control equipment functioning properly.
- Car pool, use mass transit, bicycle or walk more.

Handcleaners, mechanic/ painter

Hazardous ingredients:
acrylic acid, butylate hydroxytolune, ethanolamines, ethoxylated alcohols, methionine, mineral spirits, naphtha, p-chloro-m-xylenol, petroleum distillates, propylene glycol

Potential hazards:
Irritant to skin. Flammable. Toxic.

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 school shop class. Dispose of empty container in the garbage.

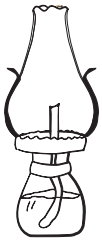
2nd Best: Hold for a household hazardous waste collection. Call local government solid waste department for information.

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

Hazardous ingredients:
aliphatic hydrocarbons, aromatic hydrocarbons (benzene, naphthalene, toluene, xylene)



Potential hazards:
Flammable. Explosive. Highly toxic. Irritant to skin.

Use and storage:
See "Gasoline" listing.

Disposal:
Best: Use up or give away.

2nd Best: Hold for a household hazardous waste collection. Call your garbage hauler or local government solid waste department for information. Contact the local regional Division of Environmental Quality office for recycling options and a recycling directory.

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

Hazardous ingredients:
aliphatic and aromatic hydrocarbons (benzene, naphthalene, toluene, xylene)

Potential hazards:
Flammable. Toxic.

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.

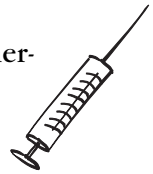
Disposal:
Best: Use up or give away. Dispose of empty container in the garbage.

2nd Best: Hold for a household hazardous waste collection. Call local government solid waste department for proper handling information. Contact the local regional Division of Environmental Quality for information on recycling options and a recycling directory.

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 generated by households in Idaho are disposable hypodermic syringes and needles (called sharps) used for home medications in the treatment of diabetes and allergies. Other types of medical wastes produced by households are cultures and stocks, biological waste and pathological waste. Improper disposal of sharps can injure garbage haulers and landfill workers or, if contaminated with infectious disease organisms, transmit communicable diseases.

Disposal:
Sharps and other medical wastes are characterized as infectious waste and should be disposed of separately from household garbage. 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.

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: Do not dispose of medicines in the toilet or sink. Contact your local sheriff's department to inquire about the availability of a prescription drug take-back program. If no such program is available, contact the state police and/or public health district to find out whether a prescription collection event is planned in your area.

2nd Best: If no collection program is available, it is permissible to dispose of non-hazardous pharmaceuticals in an outdoor garbage can Remove from original containers, mix with an undesirable substance, such as used coffee grounds or kitty litter, put in an impermeable, non-descript container, and hide in your trash. Avoid disposing of pharmaceuticals in an indoor garbage container where children or pets might have access to them.

Further precautions:

Post the Idaho Poison Control Center phone number next to your phone. 1-800-860-0620

In cases of suspected poisoning, do not induce vomiting unless the Idaho Poison Control Center tells you to. Some substances can cause severe damage when vomited.

Medicines are the most common substance involved in childhood poisonings.

Moss killer

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.

2nd Best: Hold for a household hazardous waste collection. Contact local government solid waste department for the disposal options available in your community.

Alternatives:

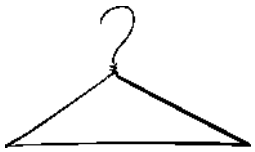
Structural demossing:

- 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.
- Thatch your lawn and rake out the moss.

Mothballs/moth crystals



Hazardous ingredients:

naphthalene, p-dichlorobenzene

Potential hazards:

Poisonous when eaten. May look like candy to 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.

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:

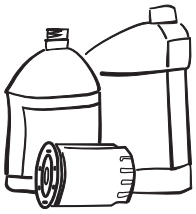
Best: Use up in a seldom-used room or give away.

2nd Best: Hold for a household hazardous waste collection. Contact local government solid waste department for disposal options available in your community.

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 its use of toxic solvents.
- Store seasonal woolens in very tight containers when not in use.
- Vacuum rugs, carpets and upholstered furniture regularly.

Motor oil/oil filters



Hazardous ingredients:

chromium, lead, petroleum hydrocarbons, polynuclear, aromatic hydrocarbons, zinc

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 ignition sources (i.e. flames).

Disposal:

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

Used Oil: Some automotive shops will take uncontaminated do-it-yourselfers used oil. Contact local government solid waste department for information on proper handling and disposal of used oil. Call your local regional Division of Environmental Quality office for recycling options and a recycling directory.

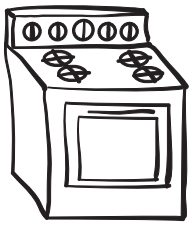
Oil Filters: Contact your local scrap metal recycler to see who will accept your well-drained oil filters or hold for a household hazardous waste collection event (contact your local government solid waste department for more information). Contact the regional Idaho Division of Environmental Quality for recycling options and a recycling directory.

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



Hazardous ingredients:

glycol ethers, lye (sodium and potassium hydroxide), methylene chloride, petroleum distillates

Potential hazards:

Corrosive to skin, eyes and internal organs.

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.

2nd Best: Hold for a household hazardous waste collection. Call local government solid waste department for information.

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.
- Mix 3 tablespoons of baking soda with 1 quart warm water or mix 2 tablespoons liquid soap and 2 teaspoons borax with warm water. Spray on, wait 20 minutes, then clean.
- Use a noncorrosive commercial oven cleaner that does not contain lye.

Paint, oil-based/stain/spray

Hazardous ingredients:
alkyl resin, kerosene, lead, lithopone, mercury, methylene chloride, methyl ethyl ketone, mineral spirits, titanium dioxide, toluene, trichloroethane, xylene

Potential hazards:
Flammable. Toxic. Irritant to skin, eyes and lungs. Toxic fumes can accumulate in closed spaces and areas with poor ventilation.

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 gloves. Store in a secure area away from children, pets or heat source.

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.

2nd Best: Give leftover, non-lead paint to someone who can use it, such as a theater group, sign maker, commercial painter or non-profit group.

3rd Best: Hold for a household hazardous waste collection. Contact local government solid waste department for information regarding proper handling. Your local regional Division of Environmental Quality office also has information on paint recycling options in your area.

Alternatives:
- Choose latex water-based paints. Latex paints contain fewer flammable and toxic solvents than oil-based products.

Note: Exterior latex may contain a mercury pesticide to prevent mildew and should be used only in well-ventilated areas.

- Apply paints by sponge, 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", "100% acrylic"

  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

Hazardous ingredients:
acrylic resins, ethylene glycol, lead, mercury

Potential hazards:
Indoor latex has low toxicity. Exterior latex with mercury pesticide is highly toxic if ingested. Any latex may contain mercury if manufactured before 1991 or lead if manufactured before 1973.

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.

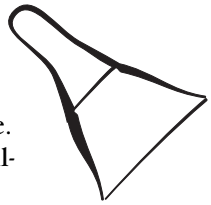
2nd Best: Hold for a household hazardous waste collection. Contact local government solid waste department for information regarding proper handling. Your local Division of Environmental Quality office also has information on recycling options.

3rd Best: Air dry unwanted paint in the can if it does not contain lead. Leave lid off and dispose of in the garbage.

Alternatives:
- Use whitewash (a combination of hydrated lime, water and salt which lacks heavy metal pigments, alkyd resins and other chemicals common in paint) for fences, barns, basements and outbuildings. Use a dust mask when mixing.
- Look for new, low-volatility paints that have little or no ethylene glycol or other petroleum-based solvents.

A 1987 study, sponsored by the U.S. Environmental Protection Agency, found that 27 to 43 percent of all household hazardous wastes disposed of in landfills were paint products.

Paint strippers/paint scrapings



Hazardous ingredients:
Solvent-based-acetone, benzene, carbon tetrachloride, methanol, methylene chloride, phenols, toluene. Water-based-aliphatic petroleum distillates, dibasic acid esters, n-methyl-2-pyrrolideone (NMP), propanic acid, propylene carbonate. 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.

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. Call the Idaho Lead Awareness Program at 1-208-334-4980 for more information.

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 and 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 is use. Store in a secure place away from children and sources of heat or flames.

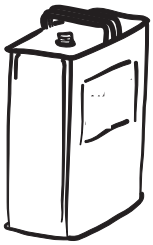
Disposal:
Best: Use up or give away. Hold unused paint stripper for a household hazardous waste collection. Call local government solid waste department for proper handling and disposal instructions.

2nd Best: Wrap scrapings in several layers of newspaper and place in a heavy-duty plastic bag. Dispose of bag and container in the garbage.

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 work 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



Hazardous ingredients:
acetone, methanol, naphtalene, toluene, turpentine, xylene

Potential hazards:
Flammable. Highly toxic. Vapors easily inhaled. Absorbed through skin contact.

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 pour off the clear thinner and reuse. Let the sludge dry out in a secure, well-ventilated area (preferably outdoors). Hold for a household hazardous waste collection. Call local government solid waste department for proper handling and disposal instructions or the local regional Division of Environmental Quality office for recycling options.

2nd Best: Wrap dried sludge in newspaper and dispose of in the garbage.

Alternative:
- Avoid the use of paint thinners by choosing water-based paints.

Permanent wave solution, home hairstyling

Hazardous ingredients:
amines, ammonium lauryl sulfate, ammonium thioglycolate, diethylenetriamine, phenacetin, vinyl acetate

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

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.

2nd Best: Hold for a household hazardous waste collection. Contact local government solid waste department for instructions.

3rd 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.

Pesticides (insect, rodent and weed killers and fungicides)

Hazardous ingredients:
More than 1400 active pesticide ingredients are used in over 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, Arsenates, Chlordane, Creosote, Cyanides, DBCP, DDT, Dieldrin, Heptachlor, Kepone, Lindane, Mires, 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.

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. Sore 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 the local 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 or use it to make up your next application. Wrap empty container in newspaper and dispose in the garbage.

2nd Best or Best if a banned or restricted use pesticide: Hold for a household hazardous waste collection. Call local government solid waste department for information.

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 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 the U of I Cooperative Extension System office in your county (call 1-208-885-7982 or see Appendix E, if you don't know your local office).
- Carefully identify pests. 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, providing feeding supplements available at garden centers and reducing the use of pesticides.
- Grow plants that are resistant to insects and diseases in your area.
- 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.

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 any 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 down spouts. Wooden parts of house should not contact soil.
- Remove potential sources of any 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, leaf rollers 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).
- 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 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. Wash bedding.
- Restrict pet access from bedrooms, attics, basements and hard-to-clean areas.
- Bathe pets with shampoo or use flea comb regularly (outdoors).
- Growth regulators such as methoprene or fenoxycarb prevent egg and larvae from developing. They are nearly nontoxic to mammals but hazardous to other insects, 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.

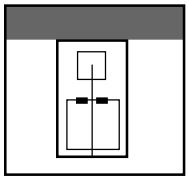
For insects on plants:

- Use resistant plant varieties wherever possible. Ask the local U of I Cooperative 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.
- Use floating row covers such as Reemay or Agronet as a barrier against leaf miners, carrot rust fly, cabbage maggot and other pests which lay eggs on or near plant leaves.
- Time plantings of annuals to avoid periods of heavy infestation.

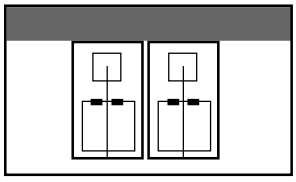
"When you kill a beneficial insect, you inherit its work." -Carl Huffaker

For mice and rats:

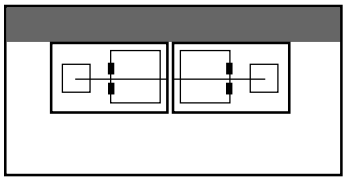
- Sanitation is crucial. Litter encourages rodents. Use garbage cans with tight-fitting lids. Clean up food scraps. Store food, including pet food, in metal containers that rodents cannot readily gnaw through.
- Seal possible points of entry before mice and rats seek shelter from cold autumn weather (a mouse can enter through a ½ 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 better, oatmeal and honey.



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 ¼ 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.

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. Collect them in a jar or can, then flush them away. Pay kids a "slug bounty" to pick them up.
- 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. If kept dry, this makes an irritating, drying surface that slugs find unattractive.
- Slug bait is toxic to small animals. If you use it, put it into pet- or child-proof traps.

For weeds:

- Know your weeds! Most annual and biennial weeds can easily be pulled by hand. Hire neighborhood youth 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.
- Direct water and fertilizer to desirable plants and away from weeds.

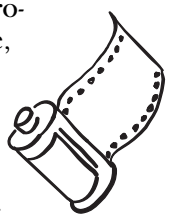
For yellow jackets:

- 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.

Photographic chemicals

Hazardous ingredients:
ammonium hydroxide, boric acid, hydrochloric acid, silver, sodium thiocyanate, trichloroethane



Potential hazards:
Corrosive. Acids can burn and blind. Can cause skin, eye and lung irritation.

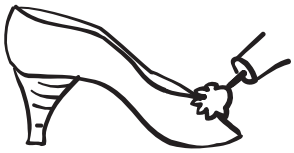
Use and Storage:
Use according to label instructions. Cover all exposed skin. Wear chemical splash goggles and heavy rubber gloves. A canopy-type exhaust hood should be sufficient for photograph development done occasionally in the home. A bathroom-type exhaust fan is not adequate. ALWAYS ADD ACID TO WATER when mixing chemical solutions. 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.

2nd Best: Hold for a household hazardous waste collection. Contact your local government solid waste department for information.

3rd Best: If your home is connected to a city sewer system, you may be able to get permission to flush small amounts of well mixed and diluted black-and-white photography solution down the drain (toilet is preferable) with plenty of water.

Polishes, shoe



Hazardous ingredients:
methylene chloride, mineral spirits, nitrobenzene, silicones, trichloroethylene

Potential hazards:
Flammable. Toxic. Absorbed through skin contact and vapor inhalation.

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 container in the garbage.

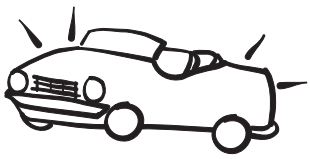
2nd Best: Hold for a household hazardous waste collection. Contact your local government solid waste department for information.

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

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.



Use and storage:
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 container in the garbage.

2nd Best: Hold for a household hazardous waste collection. Contact your local government solid waste department for information.

Alternatives:

- Use 2 tablespoons of mild dish detergent plus 2 gallons of warm water. Wash car over porous surface if possible, rather than letting rinse water enter a storm drain.

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 ¼ 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

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.

Use and storage:

Avoid using products which 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.

Disposal:

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

2nd Best: Hold for a household hazardous waste collection. Contact your local government solid waste department for information.

Alternatives:

For aluminum:

- See "Cleaners" 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 varnish, 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 silverplate. 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

Hazardous ingredients:

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

Potential hazards:

Flammable. Toxic. Irritant.

Use and storage:

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:

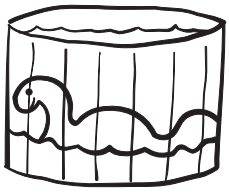
Best: Use up or give away. Dispose of empty container in the garbage.

2nd Best: Hold for a household hazardous waste collection. Contact your local government solid waste department for information.

Alternatives:

- For unvarnished wood, apply mineral oil or vegetable oil sparingly with 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 naptha. 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



Hazardous ingredients:

bromine, calcium chloride, chlorine, copper-based algicides, 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, 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.

2nd 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.

3rd Best: If on a septic tank or for large amounts, hold for a household hazardous waste collection. Contact your local government solid waste department for information.

Alternatives:

- Use ozone or ultraviolet light systems designed to kill bacteria and algae. They reduce the need for pool chemicals.
- Use pool chemicals sparingly.
- For more information about pool safety, request "The Sensible Way to Enjoy Your Pool." Available for a small fee from the National Spa & Pool Institute, 2111 Eisenhower Ave, Alexandria, VA 22314.

Rug/carpet cleaners

Hazardous ingredients:

butyl cellusolve (ethylene glycol, monobutyl ether), maleic anhydride resin, petroleum distillates, trichloroethane, various surfactants

Potential hazards:

Toxic. May be flammable. Irritant to skin, eyes and mucous membranes.

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.

Disposal:

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

2nd Best: Hold for a household hazardous waste collection. Contact your local government solid waste department for information.

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:

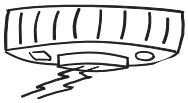
- Act fast! Quickly blot up (don't rub) as much as possible. Cotton towels and rags are more absorbent than synthetic fabrics.
- Club soda or clear water are effective on some types of stains, particularly from alcoholic beverages, coffee, or tomato-based food.
- Grease stains may require a solvent.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

Smoke detectors, ionizing type

Hazardous ingredients:
Ionizing smoke detectors contain a small amount of radioactive material, Americium-241.



Potential hazards:
Low-level radioactivity.

Use and storage:
Install and maintain according to manufacturer directions.

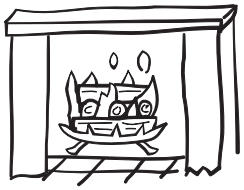
Disposal:
Best: Return to the manufacturer (address on base of detector) or retailer.

2nd 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



Hazardous ingredients:
cupric chloride

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.

2nd Best: Hold for a household hazardous waste collection. Contact your local government solid waste department for information.

Alternatives:

- Follow operating instructions for your wood stove.
- Burn dry, clean wood. Firewood should be seasoned (dried) at least 6-8 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

Hazardous ingredients:
ammonium hydroxide, isoamyl acetate, naphtha, perchloroethylene, petroleum distillates, sodium hypochlorite, trichloroethane

Potential hazards:
Flammable. Highly toxic. Vapors easily inhaled. Absorbed through skin contact.

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

2nd Best: Hold for a household hazardous waste collection. Contact your local government solid waste department for information.

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 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 sink 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:

- Try borax or vinegar.

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. Apply dishwashing liquid or wet spotter and rinse again.

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 bloodstains 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.

Thermometer, medical/ household

Hazardous ingredients:
metallic mercury

Potential hazards:
Vapors are harmful if inhaled. Broken thermometers pose a danger of long-term vapor inhalation if not cleaned up properly.

Disposal:
Best: In the event of breakage, do not attempt to vacuum up the mercury. You may permanently contaminate the vacuum cleaner. Remove rings and other metallic jewelry. Mercury combines with many other metals on contact. Use a wooden toothpick or piece of cardboard to push mercury droplets together and into a glass bottle. Pay special attention to rugs and cracks in the floor. Tightly cap the bottle. Hold for a household hazardous waste collection. Contact your local government solid waste department for information.

2nd Best: Contact your dentist's office to see if they will accept the mercury. Dental offices often collect mercury left over from making amalgams for fillings and send it to companies who reclaim the metals.

Alternative:

- Choose a flex-tape, electronic or other non mercury thermometer.

Transmission fluid

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 motor oil or other automotive products.

Disposal:
Best: Hold for a household hazardous waste collection. Contact your local government solid waste department for information. Your local DEQ office can help with recycling options and provide a recycling directory.

Windshield wiper solution

Hazardous ingredients:
methanol

Potential hazards:
Highly toxic. Harmful or fatal if ingested.

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.

2nd Best: Hold for a household hazardous waste collection. Contact your local government solid waste department for information.

3rd Best: If connected to a city sewer system, flush small amounts that DO NOT contain methanol down an inside drain (toilet preferable) with lots of water.

When leaving your car outside overnight in the winter, mix 3 parts vinegar to 1 part water and coat the windows with this solution. This vinegar and water combination will keep windshields ice and frost-free.

Wood preservatives

Hazardous ingredients:
copper oleate, mineral spirits, naphthenic acid

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. 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.

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 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 containers tightly closed when not in use. Store in a box lined with plastic in a locked cabinet or 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.

2nd Best: Hold for a household hazardous waste collection. Contact your local government solid waste department for information.

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.
- Choose borax-based wood preservatives.
- Buy pressure-treated lumber. The preservative penetrates the wood more effectively than hand-application and exposure is minimized.
- 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 with a retainer.

Glossary

Absorption: The up take 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 or solid suspended in a gas.

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

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.

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 along 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 a 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.

Desiccant: A chemical that induces rapid drying of a leaf, plant part or insect.

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.

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.

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

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 in a given situation.

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 stimulation, especially to the skin.

Mists: 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.

Nitrile gloves: Gloves made from a synthetic rubber material (nitrile) that resists chemicals and has superior puncture, cut, and abrasion resistance. Not recommend for use with ketones (such as acetone), strong oxidizing acids, and organic chemicals containing nitrogen. Available at most hardware stores or departments.

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. ALL ORGANIC SOLVENTS ARE HAZARDOUS. They are flammable and highly toxic with both immediate (acute) and long-term (chronic) health effects.

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 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, 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.

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.

Appendix A

Idaho Division of Environmental Quality

Solid waste reduction, recycling and household hazardous waste information

DEQ—State Office
1410 North Hilton
Boise, Idaho 83706
(208) 373-0502

DEQ—Boise Regional Office
1445 North Orchard
Boise, Idaho 83706-2239
(208) 373-0550

DEQ—Coeur d'Alene Regional Office
2110 Ironwood Pkwy.
Coeur d'Alene, Idaho 83814
(208) 769-1422

DEQ—Idaho Falls Regional Office
900 Skyline Suite B
Idaho Falls, Idaho 83402
(208) 528-2650

DEQ—Lewiston Regional Office
1118 F Street
Lewiston, Idaho 83501
(208) 799-4370

DEQ—Pocatello Regional Office
224 S. Arthur
Pocatello, Idaho 83204
(208) 236-6160

DEQ—Twin Falls Regional Office
601 Pole Line Road, Suite 2
Twin Falls, ID 83301
(208) 736-2190

Appendix B

Local Government Household Hazardous Waste Collection Programs.

Ada County/City of Boise

A permanent household hazardous waste facility at the Hidden Hollow Landfill opened in May 1998. In addition, the city operates a mobile collection program at various fire stations around the city on a regular basis.

Contact: Ada County Solid Waste
(208) 853-1297

Boise City Public Works
(208) 384-3900

Bannock County

Collection event usually held two times per year.

Contact: Bannock County Solid Waste
(208) 236-0607

Bonner County

Weekly collection of some household hazardous waste. Call to get complete information.

Contact: Bonner County Solid Waste
(208) 265-1459

Latah County

Moscow Recycling Center and Latah County hold a collection event annually. The center also routinely accepts small quantities of used motor oil and lead acid batteries.

Contact: Moscow Recycling Center (208) 882-0590

Kootenai County

Ramsey Road transfer station accepts a wide range of household waste. Call for operating hours for hazardous waste drop-off.

Contact: Ramsey Road Transfer Staion
(208) 769-4402

Southeastern Idaho

The Health District is working with the counties to develop a collection program for counties located in southeastern Idaho.

Contact: District Health Dept. (208) 233-9080

For other areas, contact your local landfill, your city or county solid waste department, the district health department, or local DEQ office. (See other Appendices)

Appendix C

District Health Departments

For information on solid waste disposal, recycling and household hazardous waste.

Panhandle District Health Department.
2195 Ironwood Court
Coeur d'Alene, ID 83814
(208) 667-9513

North Central District Health Department.
215 10th Street
Lewiston, ID 83501
(208)799-3100

Southwest District Health Department.
920 Main Street
Caldwell, ID 83605
(208) 455-5400

Central District Health Department.
707 N. Armstrong Pl.
Boise, ID 83704
(208) 327-7499

South Central District Health Department.
213 Third Ave. East
P.O. Box 547
Twin Falls, ID 83303-0547
(208) 734-5900

Southeastern District Health Department.
465 Memorial Drive
Pocatello, ID 83201
(208) 233-9080

District VII Health Department
254 "E" Street, P.O. Box 1855
Idaho Falls, ID 83403
(208) 522-0310

Appendix D

Landfills

Ada County

Hidden Hollow Landfill
1030 N. Seaman's Gulch Road
Boise, ID 83703
(208) 853-1296

Adams County

Goodrich Landfill
P.O. Box 48
Council, ID 83612
(208) 253-4561

Bannock County

Fort Hall Canyon New MSWLF
1500 N. Hall Mine RD
Pocatello, ID 83205
(208) 236-0607

Bear Lake County

Montpelier Canyon Landfill
P.O. Box 190
Montpelier, ID 83261
(208) 847-1061 (Road and Bridge dept.)

Bingham County

Fielding/Bingham County Landfill
Box 607
Blackfoot, ID 83221
(208) 346-6211

Boise County

Idaho City/Warm Springs RD
P.O. Box 157
Idaho City, ID 83631
(208) 392-4431 (superintendent)

Bonneville County

Peterson Hill Landfill - Bonneville CO LF
605 N. Capitol Ave.
Idaho Falls, ID 83402
(208) 528-5550 (Transfer station)

Boundary County

Boundary County Landfill
Boundary County Courthouse
Bonners Ferry, ID 83402
(208) 267-3812

Butte County

Arco MSWLF
Arco, ID 83213
(208) 527-3021 (commissioner's office)

Butte County

Howe Landfill
Arco, ID 83213
(208) 527-3021 (commissioner's office)

Canyon County

Pickles Butte Landfill
1115 Albany Street
Caldwell, ID 83605
(208) 466-7288

Caribou County

Caribou County MSWLF
159 S. Main
Soda Springs, ID 83276
(208) 425-3982

Cassia County

S.ID.Reg.SWLF-Milner Butte
P.O. Box 159
Burley, ID 83318
(208) 432-9082

Elmore County

Bennet Road Landfill
P.O. Box 756
Mountain Home
(208) 587-1125 wait for tone, then dial 1183

Elmore County

Mountain Home AFB Landfill
366 CES/CEVP, BLDG 1297
Mountain Home, ID 83
(208) 828-1684

Appendix D—continued landfills

Elmore County

Glenns Ferry Landfill
Elmore county courthouse
Mountain Home 83647
(208) 366-7418

Franklin County

Franklin County MSWLF cup
39 W. Oneida
Preston, ID 83263
(208) 852-6107

Fremont County

St. Anthony Landfill
151 West 1st North
St. Anthony, ID 83445
(208) 351-4150

Jefferson County

Jefferson County LF—Circular Butte
134 N. Clark
Rigby, ID 83441
(208) 745-9224

Kootenai County

Fighting Creek/Farm Landfill
500 Government Way
Coeur d'Alene, ID 83814
(208) 765-5154

Lemhi County

Lemhi County Landfill-North Rifle Range LF
206 Courthouse Drive
Salmon, ID 83467
(208) 756-6441

Oneida County

Malad Landfill
10 Court St.
Malad, ID 83252
(208) 766-4014

Owyhee County

Rimrock Landfill
P.O. Box 128
Murphy Idaho 83650
(208) 495-2421

Payette County

Clay Peak Landfill
1130 3rd Ave. North
Payette, ID 83661
(208) 642-6036

Teton County

Driggs Landfill
P.O. Box 756
Driggs, ID 83422
(208) 354-2905

Twin Falls County

Twin Falls—Hub Butte
P.O. Box 126
Twin Falls, ID 83301
(208) 734-5271

Appendix E

University Of Idaho County Cooperative Extension Offices.

Gardening, pest control, composting, home economics and many other subjects.

University of Idaho

Cooperative Extension System
Building J40 Idaho St.
Moscow, ID 83843-4196
(208) 885-7982

Ada County

5880 Glenwood
Boise, ID 83714
(208) 377-2107

Adams County

P.O. Box 43
Council, ID 83612
(208) 253-4279

Bannock County

130 North 6th
Pocatello, ID 83201
(208) 236-7318

Bear Lake County

P.O. Box 237
Paris, ID 83261
(208) 945-2265

Benewah County

701 College Ave.
St. Maries, ID 83866
(208) 245-2422

Bingham County

P.O. Box 279
Blackfoot, ID 83221
(208) 785-8060

Blaine County

Box 216
Hailey, ID 83333
(208) 788-5585

Bonner County
P.O. Box 1526
Sandpoint, ID 83864
(208) 263-8511

Bonneville County
2925 Rollandet
Idaho Falls, ID 83402
(208) 529-1390

Boundary County
P.O. Box 267
Bonners Ferry, ID 83805
(208) 267-7259

Butte County
P.O. Box 832
Arco, ID 83213
(208) 527-8587

Camas County
P.O. Box 430
Fairfield, ID 83327
(208) 764-2230

Canyon County
P.O. Box 1058
Caldwell, ID 83606
(208) 459-6003

Caribou County
159 South Main
Soda Springs, ID 83276

Cassia County
1451 Overland Ave. Rm2
Burley, ID 83318
(208) 678-9461

Clark County
P.O. Box 65
Dubois, ID 83423
(208) 374-5405

Clearwater County
2200 Michigan Ave. Box E
Orofino, ID 83544
(208) 476-4434

Custer County
P.O. Box 160
Challis, ID 83226
(208) 879-2344

Elmore County
150 South 4th East #1
Mountain Home, ID 83647
(208) 587-2136

Franklin County
51 W. Oneida
Preston, ID 83263
(208) 852-1097

Fremont County
151 West 1st North
St. Anthony, ID 83445
(208) 624-3102

Gem County
2199 South Johns
Emmett, ID 83617-9496
(208) 365-6363

Gooding County
202 14th Ave. East
Gooding, ID 83330
(208) 934-4417

Idaho County
Rm. 3 County Courthouse
Grangeville, ID 83530
(208) 983-2667

Jefferson County
134 North Clark
Rigby, ID 83442
(208) 745-6685

Jerome County
300 N. Lincoln
Jerome, ID 83338
(208) 324-7578

Kootenai County
106 East Dalton Ave.
Coeur d'Alene, ID 83815
(208) 667-6426

Latah County
P.O. Box 8068
Moscow, ID 83843
(208) 883-2267

Lemhi County
201 Broadway St.
Salmon, ID 83467
(208) 756-2824

Lewis County
P.O. Box 9
NezPerce, ID 83543
(208) 937-2311

Lincoln County
P.O. Box 608
Shoshone, ID 83352
(208) 886-2406

Appendix E—continued, University of Idaho County Cooperative Extension Offices

Madison County
P.O. Box 580
Rexburg, ID 83440
(208) 356-3191

Minidoka County
614 7th St.
Rupert, ID 83350
(208) 436-7184

Nez Perce County
1239 Idaho St.
Lewiston, ID 83501
(208) 799-3096

Oneida County
30 North 100 West
Malad, ID 83252
(208) 766-2243

Owyhee County
P.O. Box 400
Marsing, ID 83639
(208) 896-4104

Payette County
915 Center Ave. P.O. Box 10
Payette, ID 83661
(208) 642-6022

Power County
543 Bannock Ave.
American Falls, ID 83211
(208) 226-7621

Shoshone County (contact the Kootenai County office)

Teton County
P.O. Box 146
Driggs, ID 83422
(208) 354-2961

Twin Falls County
246 3rd Ave. East
Twin Falls, ID 83301
(208) 734-9590

Valley County
PO Box 510
Cascade, ID 83611
(208) 382-3249

Washington County
485 East 3rd
Weiser, ID 83672
(208) 549-0415

Appendix F

Other Resources

Product information

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

Toxic substances and pesticides information

Environmental Protection Agency
1200 Sixth Ave
Seattle, WA 98101
1-800-424-4EPA (toll free)

EPA Pesticide Information Hotline
1-800-858-7378 (toll free)

Idaho Poison Control Center
1-800-860-0620

Idaho Emergency Medical Services
(208) 334-4013

Idaho Home*A*Syst Program
(208) 338-4321

Publication Co-Sponsors

Ada County Solid Waste Dept.
650 Main Street
Boise, Idaho 83702
phone: (208) 853-1297

Boise Public Works Environmental Division
P.O. Box 500
Boise Idaho 83701
phone: (208) 384-3901

Bannock County Solid Waste Dept.
1500 N Fort Hall Mine Road
Pocatello, Idaho 83204
phone: (208) 236-0607

Kootenai County Solid Waste
3650 Ramsey Rd.
P.O. Box 9000
Coeur d'Alene, Idaho 83816-9000
phone: (208) 769-4402

Moscow Recycling
P.O. Box 9385
Moscow, Idaho 83843
Recycling Information Line (208) 882-2925
e-mail MoscowRecycling@turbonet.com
web site: www.moscowrecycling.com

Southern Idaho Solid Waste
1050 W 400 South, Burley, Idaho 83318
(208) 432-9082
URL–http://www.sisw.org
Waste Exchange web page:
http://www.sisw.org/exchange.htm
send email to recycling@sisw.org or
landfill@sisw.org

Idaho Division of Environmental Quality

DEQ—State Office
1410 N. Hilton
Boise, Idaho 83706
(208) 373-0502
web site: www2.state.id.us/deq

DEQ—Boise Office
1445 N. Orchard
Boise, Idaho 83706
(208) 373-0550

DEQ—Coeur d'Alene Office
2110 Ironwood Pkwy.
Coeur d'Alene, Idaho 83814
(208) 769-1422

DEQ—Idaho Falls Office
900 Skyline Suite B
Idaho Falls, Idaho 83402
(208) 528-2650

DEQ—Lewiston Office
1118 F Street
Lewiston, Idaho 83501
(208) 799-4370

DEQ—Pocatello Office
224 S. Arthur
Pocatello, Idaho 83204
(208) 236-6160

DEQ—Twin Falls Office
601 Pole Line Road, Suite 2
Twin Falls, Idaho 83301
(208) 736-2190

Printed on 100% recycled paper (100% post-consumer waste) with soy ink.

PRINTED WITH COLOR SOY INK

DEQ–10000, 46613, 3/99 Cost per unit, $1.14

ʾapaqaʾánnoʾ ʾee kaa ʾepeqíicxnuʾ wéetesne
- Respect and take care of the earth.