

Chapter 7 | Household Hazardous Waste and Problem Materials



What are household hazardous wastes and problem materials?

Household hazardous wastes and problem materials are unwanted household materials that can be flammable, oxidizing, corrosive, toxic, or reactive or that contain polychlorinated biphenyls (PCBs). These products have a wide variety of uses in your household, but they can harm human health and the environment if not used, stored, or disposed of properly.

Household hazardous wastes are generated from household, not commercial, activities. This can be confusing for businesses run out of homes.

Problem materials are materials that if processed or disposed of with solid waste municipal solid waste will contribute to one or more of the following issues:

- The release of a hazardous substance, pollutant, or contaminant
- Water pollution
- Air pollution
- A significant threat to the safe or efficient operation of a solid waste facility

Included in this chapter

- What is household hazardous waste?
- The concern with household hazardous products
- How to identify hazardous products
- Labels and regulations
- How to safely store products
- Safely disposing of hazardous products
- Reducing harmful chemicals in your home

Household hazardous wastes and problem materials include:

- **Automotive products:** including antifreeze, brake and transmission fluid, fuel, oil, oil filters, and lead-acid batteries
- **Household, lawn, and garden products:** including adhesives, aerosols, batteries, cleaning products, drain cleaner, fluorescent light bulbs, paint, pesticides, poisons, pool chemicals, thermostats and thermometers (that contain mercury), stains and varnishes
- **Personal care products:** including hair spray, nail polish remover, and perfume
- **Electronics:** including cameras, DVD players, computers, game systems, printers, telephones, televisions, radios and music players, speakers, and video equipment
- **Major appliances:** including air conditioners, dishwashers, microwaves, ovens, refrigerator, stoves, washers and dryers, and water heaters
- **Tires**



The concern with household hazardous products

We use household hazardous products every day in the cleaning and fixing of our homes, maintaining our cars, and taking care of our lawns. Products such as paint, weed killer, and drain cleaners are okay when we use them up for the job they were intended, but these products can present a hazard to our health and our environment if they are not properly used, stored, and disposed.

Household hazardous wastes represent a small percentage of the waste stream. However, they are of concern to health officials and solid waste planners because, even in small amounts, they can be harmful to people and the environment.

According to the U.S. EPA, only a fraction of registered chemicals have gone through complete testing for human health concerns. Some chemicals have immediate toxic effects. Others are toxic to our bodies only after repeated, long-term exposure.

Exposure to some pesticides, paints, and solvents may produce weakness, confusion, dizziness, irritability, headaches, nausea, sweating, tremors, and convulsions. Repeated exposure to some chemicals can cause cancer or birth defects.

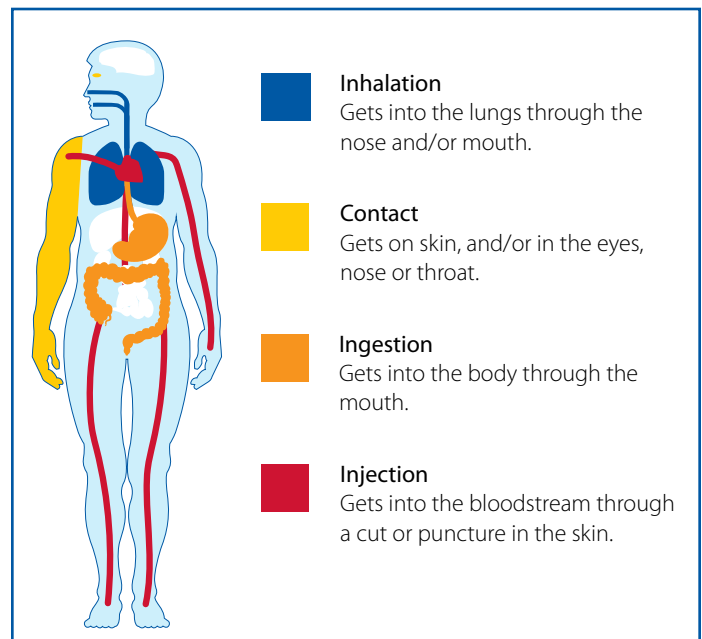
Children and pets are impacted more significantly by the negative effects of chemicals. Pound for pound, children and pets breathe more air, drink more water and eat more food than adults. When children play, they crawl and put things in their mouths. Pets can pick up harmful chemicals on their bare paws, which they can then ingest when they clean their paws. As a result, children and pets have an increased chance of exposure to potential pollutants.

Wastes thrown in the garbage threaten sanitation workers who could be injured by acids and vapors. These can also cause fires and explosions. Hazardous wastes that reach a landfill may ultimately leach into groundwater. Those that go down the drain may cause serious problems for the municipal sewage treatment system or septic systems. Some materials can pass unaltered through public and private treatment systems, polluting rivers and streams.

Because of the potential dangers associated with hazardous products in the home, it is important to know how to identify, properly use, and store them.

Exposure pathways

Chemicals can enter our bodies through a number of "exposure pathways"



How to identify hazardous products

These days it seems like every product comes with a warning, so you may not pay much attention to the words on the label. However, when it comes to hazardous products, reading the label is the easiest way to identify one.



Signal words

First, look for signal words. Federal law requires labeling of hazardous products by using these signal words. By understanding the difference in the use of the signal words, you can determine how hazardous the product is.

The signal words are listed in order of increasing toxicity, with Caution being the least toxic and Poison being the most toxic. This helps you find the least hazardous product.

	Signal Word	Hazard Level
<p>Less hazardous</p> <p>More hazardous</p>	Caution	Mild/moderate hazard
	Warning	Moderate hazard
	Danger	Extremely flammable, corrosive or highly toxic
	Poison	Highly toxic

Learn the differences in signal words and read labels to help you purchase the least hazardous products. For example, if you are comparing two bathroom cleaners and one product is labeled with Caution and another is labeled with Danger, you know the product labeled Caution is less hazardous.

Characteristic words

Characteristic words indicate the type of hazard posed by a product. These are usually found after the signal word on the label. The accompanying symbols are consistent in multiple languages.

Image	Description
	Flammable/Combustible: The product can easily catch fire and support flame.
	Corrosive: "Corrosive," "acid," "caustic," "lye," "alkaline" or "causes burns to the skin" mean that the product can burn the skin or eyes. It can also eat away other materials that it comes into contact with.
	Toxic: "Poison" or "harmful if swallowed" mean that the product is poisonous and can be harmful or fatal if swallowed, inhaled or absorbed through the skin.
	Reactive: "Do not mix with ____" or "store separately from other products" means the product may react violently or produce toxic gas if combined with other substances (examples: certain types of drain cleaners, oven cleaners or products containing bleach, ammonia or lye).

Beware of greenwashing

Greenwashing is a marketing strategy in which companies use tactics to mislead customer into thinking their products are better for the environment than they are.

Watch out for the following:

- **Best in class:** Declaring you are slightly greener than the rest, even if the rest are highly hazardous.
- **Biodegradable:** Products that are biodegradable are not always environmentally friendly.
- **False labels:** Companies often make up certifications and labels for their products that required no verification. See below for validated certifications.
- **Fluffy language:** Words or terms with no clear meaning, such eco-friendly, earth friendly, or natural. There are not regulations defining how these terms may be used.
- **Irrelevant claims:** Emphasizing one small green attribute when everything else is not green. For example: "Does not contain acid."
- **Suggestive pictures:** Using the color green or images that indicate an unjustified impact. For example: flowers blooming from exhaust pipes

Environmentally friendly certifications

- **Green Seal certification:** Products have been assessed for meeting rigorous performance, health and environmental criteria.
- **U.S. EPA Safer Choice:** Each ingredient in the product has been screened for potential human health and environmental impacts. Based on currently available information, the product contains ingredients that pose the least concern among chemicals in their class.



- The Food and Drug Administration (FDA) oversees food, medicines, cosmetics, and personal care products. The FDA does not regulate disposal of medicines.
- The Consumer Product Safety Commission (CPSC) covers all other products, including cleaners, non-chlorine bleach, wood finishes and household items not regulated by FDA.

Pesticides



The EPA requires that pesticide labels contain one of three signal words:

- Caution (toxicity category III)
- Warning (toxicity category II)
- Danger (most toxic or toxicity category I)

These signal words represent ranges of acute toxicity or irritation based on oral, dermal, inhalation, eye, and skin irritation hazards. A toxicity category IV pesticide is not required to have a signal word, but if one is used it must be Caution.

Additional requirements include:

- Labels must list specific health and environmental hazards and include first-aid information.
- Labels must identify the active ingredients, which are those that actually repel, confuse, or kill the pest.
- Labels are not required to list "inert" or "other" ingredients, which are those that have a function other than killing the target pest. This term is misleading, however, because it does not mean the ingredients are inert in terms of their effects on human health or the environment. Additionally, these unlabeled ingredients often compose the majority of the product.

Using a pesticide in a way inconsistent with its label is a violation of federal law.

Food, drugs, and cosmetics

The FDA requires manufacturers to list all ingredients in their products in descending order of quantity. Unlike the EPA and the CPSC, the FDA does not use a hierarchy of signal words to indicate hazard levels.

Labels and regulations

Three federal agencies have jurisdiction over the safety of household products that contain hazardous ingredients. These agencies determine what defines a hazardous product and specify how these materials must be labeled to identify their hazards. Product labels can provide useful information about household hazards, but each agency sets different requirements for labeling the products it regulates.

- The U.S. EPA regulates pesticides, including products intended to kill weeds (herbicides), insects (insecticides), slugs and snails (molluscicides), and bacteria (disinfectants), as well as mildew removers and wood preservatives.

Consumer products

Although the CPSC also uses signal words to identify a product's hazard level, the agency uses slightly different definitions than the EPA.

- Danger signifies extremely hazardous substances and is the highest hazard level.
- Warning or Caution are both used on all other hazardous substances.

Additional requirements include:

- Labels must identify the ingredients that contribute significant hazards, but they are not required to list all ingredients.
- Starting in the 1990s, the CPSC required that products include warnings about chronic health hazards. However, their labels include little or no information about environmental risks or proper disposal.

What's not on the label?

Except in California, product labels are not required to note ingredients that may cause cancer, reproductive problems, or birth defects. Environmental hazards are not listed on most products except on pesticide labels. Additionally, product marketing slogans may mislead consumers about product safety, and these claims are not well regulated.

The Occupational Safety and Health Administration (OSHA) requires that Safety Data Sheets (SDS) be available to workers exposed to hazardous products on the job. These sheets can provide additional information about product ingredients and hazards, but typically they are not readily available to consumers and are not required.

Finally, none of this information is useful if consumers do not read or know how to understand the labels before they buy or use household products.

How to safely store products

Storing products properly can help prevent accidents and extend a product's life.

- Keep products out of reach of children and animals.
- Store all hazardous products on high shelves or in locked cabinets away from food.
- Make sure the lids and caps are tightly sealed and childproofed.
- Store corrosive, flammable, reactive, and poisonous products on separate shelves and keep them dry.
- Store products that say "prevent freezing" (such as latex paint) indoors.

- Never mix products together (such as bleach and ammonia).
- Keep products away from heat, sparks, flames, or other sources of ignition.
- Only buy the amount of product you will use.
- Keep products in their original containers, and make sure the label is legible.
- For long-term storage, place waterproof transparent tape over product labels to prevent them from falling off.

Safely disposing of hazardous waste

Improper disposal of household hazardous wastes and problem materials, such as throwing them in the trash or pouring them down the drain, could harm your family or garbage hauler. Improper disposal may also pollute the air, water, and soil.

To address the household hazardous waste disposal issue, counties operate household hazardous waste collection sites where residents can safely dispose of their hazardous waste, often free of charge.

Hennepin County offers two such drop-off facilities. These facilities are in Brooklyn Park and Bloomington and are open year-round. Both facilities also have free product centers where residents can pick up usable paint, automotive products, cleaners, adhesives and other products for reuse. For more information, visit hennepin.us/dropoffs.

To provide a more convenient disposal option, Hennepin County also organizes collection events for household hazardous waste at various sites throughout the county in the spring, summer and fall. Visit hennepin.us/collectionevents for more information.



Disposing of medicines

Proper disposal of unwanted and unused medicine is important to prevent accidental poisoning and abuse and protect the environment. Prescription drug abuse is a growing problem, and accidental poisonings from medicines are also on the rise. Medicines flushed down the drain or disposed of in the trash can contaminate water, harm wildlife, and pollute drinking water.



Medicine drop boxes are available for the safe disposal of unwanted and unused medicines. Some are operated by Hennepin County and the Hennepin County Sheriff's Office, others are operated by city police departments, and a growing number are available at independent pharmacies. See all of the drop boxes

available at hennepin.us/medicine.

Medicines from households are accepted including:

- Prescription medicines including Schedule II-V controlled substances (such as Vicodin, Percocet and Ritalin)
- Over-the-counter medicines
- Pet medicines

Materials not accepted:

- No illegal drugs (Schedule I)
- No needles, sharps or syringes
- No medicines from businesses
- No batteries, trash, medical devices, mercury thermometers or other hazardous materials
- No cosmetics and personal care products

Disposing of needles and sharps

A sharp is any device used to penetrate the skin for healthcare purposes. Sharps include hypodermic needles,



pen needles, intravenous needles, used epi-pens, lancets and syringes.

Needles and sharps pose a safety hazard for solid waste and recycling workers. Dispose of sharps safely to prevent injury and disease transmission from needle-sticks.

Never place containers with used needles or syringes or loose needles in a recycling bin or in the garbage.

Use one of the following options to dispose of sharps:

- **Check with your healthcare provider:** Some clinics and hospitals have collection programs for household needles and sharps.
- **Destroy at home:** Devices or containers are available with mechanisms that bend, break, incinerate (destroy with high heat), or shear needles. Disposal after the sharp has been destroyed varies based on the destruction method.
- **Mail-back programs:** Several mail-back options are available.
- **Hennepin County Drop-offs Facilities:** The drop-off facilities in Brooklyn Park and Bloomington accept sharps from households.

See the Green Disposal Guide for more information about each of these options.

Reducing harmful chemicals in your home



You can make simple changes to reduce exposure to toxic chemicals at home by considering the following options:

- Remove your shoes at the entrance to your home so you don't track chemicals from outside throughout your house.
- Use pump spray products instead of aerosols as aerosol mist is more easily inhaled.
- Avoid chemical air fresheners and candles.
- Avoid chemicals used in traditional dry cleaning.
- Buy fewer household hazardous products by avoiding specialty cleaners, using multipurpose cleaners and using single-ingredient products like vinegar or baking soda for cleaning. See our Green Cleaning Recipe Guide for recipes to make your own.
- Use a fabric shower curtain instead of a vinyl as vinyl releases chemical gases.

- Use mercury-free thermometers such as alcohol or digital ones. Take mercury thermometers to a hazardous waste collection site.
- Dispose of hazardous products properly.
- Avoid chemical pesticides and herbicides.



Resources

- **hennepin.us/dropoffs**: Information about the Hennepin County drop-off facilities in Bloomington and Brooklyn Park, including locations, hours, materials accepted and fees.
- **hennepin.us/collectionevents**: Information about household hazardous waste collection events organized by Hennepin County.
- **hennepin.us/medicine**: Information about medicine disposal drop boxes and options in Hennepin County.
- **hennepin.us/green-disposal-guide**: The Hennepin County Green Disposal Guide is a searchable directory of recycling and disposal options for common household items.
- Print resources: order printed copies at **hennepin.us/environmentaleducation**
 - Drop-off facility brochure
 - Reducing hazardous chemicals in your home and green cleaning recipes
 - Medicine disposal program factsheet
 - Safe disposal of needles and syringes brochure