HERITAGE
ENVIRONMENTAL SERVICES

Top 10 Household Hazardous Wastes

Definitions, Dangers, & Directions

Contents

Introduction

What is Household Hazardous Waste?

The purpose of this e-Book is to provide information about ten common types of household hazardous wastes. The EPA defines a household hazardous waste as, “leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients.” This e-Book will help you by serving as a means of identifying possible HHW items in your home and by providing you with information about how to dispose of them.

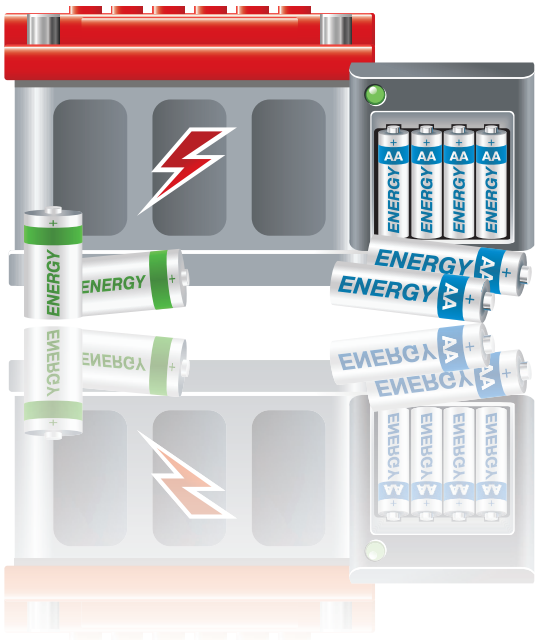
Why are household hazardous wastes a danger / why do you need to dispose of them in a special way?

Improper disposal of these wastes can pollute the environment and pose a threat to human health. These items, when improperly disposed of, can cause poisoning, harm to the ground water, air quality, and soil quality.

1. Batteries

What are they?

This category includes used or spent batteries, such as alkaline or lead-acid car batteries.



What's the danger?

According to the Duracell website, normal alkaline batteries can, in most cases, be thrown out with your household trash; however, we recommend that you recycle them or take them to an HHW event whenever possible because, although mercury has been removed from most commercial alkaline batteries available today, they still contain toxins that should not be released into the environment.

Additionally, if you do choose to throw away your used batteries, it is important that you do so in small numbers. Even dead batteries are often times not completely drained, so throwing away large quantities of batteries together could still be dangerous. A large group of mostly used batteries can work together to produce a charge.

Lastly, due to the chemicals in battery types other than alkaline, you should make sure to recycle rechargeable, lithium, lithium ion, and zinc air batteries. There are several ways to recycle batteries, and a quick internet search will provide you with plenty of options including Heritage Lifecycle Battery Recycling Kits.

Some examples:

- Car Batteries (Lead-acid)
- Alkaline Batteries (AA, AAA, C, D)
- Rechargeable Batteries (Lithium-ion, NiMH, NiCd)
- Camera Batteries
- Lithium Batteries
- Zinc Air Batteries
- Etc.

2. Fluorescent Light Bulbs

What are they?

This category includes fluorescent lamp tubes or bulbs. Fluorescent lamp ballasts are also considered a part of this category.

What's the danger?

These bulbs contain small amounts of mercury, a potent, developmental neurotoxin that can damage the brain, liver, kidneys and central nervous system, especially in infants and young children.

The bulbs are perfectly safe as long as the glass is not broken and for that reason it is important to be especially careful when disposing of spent fluorescent bulbs. Since they contain mercury, fluorescent bulbs should be recycled in order to ensure that they stay out of landfills where they could contaminate the air, soil and / or groundwater.

Some examples

CFLs (Compact Fluorescent Lamp), U-Bends, Circular 4' and 8' fluorescent lamp tubes

The EPA provides a few reasons why is Recycling CFLs Important as well:

Recycling prevents the release of mercury into the environment. CFLs and other fluorescent bulbs often break when thrown into a dumpster, trash can or compactor, or when they end up in a landfill or incinerator.

Other materials in the bulbs get reused. Recycling CFLs and other fluorescent bulbs allows the reuse of the glass, metals, and other materials that make up fluorescent lights. Virtually all components of a fluorescent bulb can be recycled.

Your area may require recycling. Some states and local jurisdictions have more stringent regulations than the U.S. EPA does, and may require that you recycle CFLs and other mercury-containing light bulbs. California, Maine, New Hampshire (PDF), Minnesota, Vermont and Massachusetts, for example, all prohibit mercury-containing lamps from being discarded into landfills.

3. Pesticides and Herbicides

What are they?

These are substances used to help control pests like insects, arachnids, rodents, and weeds. Oftentimes used in gardening, they are intended to help us keep these pests both from damaging produce and harming people with bites or stings.

What's the danger?

According to the University of Missouri, accidental exposure to pesticides can occur through ingestion, inhalation, and / or skin absorption. Once exposed, pesticides can harm organisms including pets, livestock, wildlife, and people. Physical reaction varies in relation to the type of pesticide, the amount of pesticide one is exposed to, and the age and health of the victim.

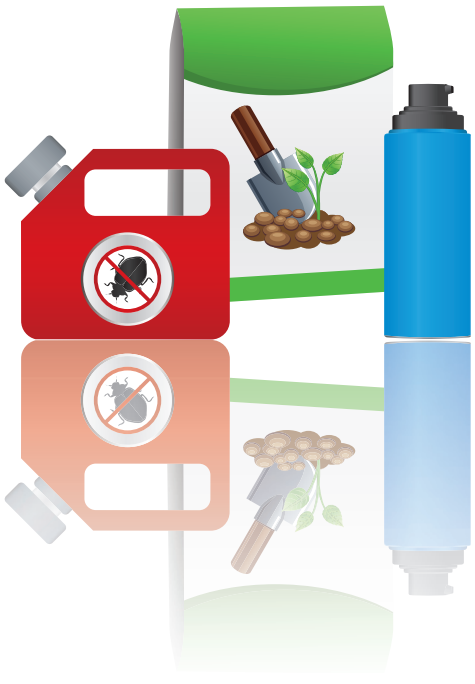
Similar to most kinds of household poisons, children are generally more susceptible to harm from pesticides than are adults, due to lower body weight and increased toxins per pound. "Children are also especially sensitive to the neurotoxins often found in pesticides, because children's immune systems, organs, brains, and nervous systems are still developing."

Some examples:

- Non-Aerosol Pesticides and Herbicides
- Rat Poison
- Roach Traps
- Home and Garden Sprays (Non-Aerosol)
- Roundup
- Weed-B-Gon
- Non-Aerosol Sprays
- Citronella Candles
- Fertilizer
- Ant Traps
- GrubEx
- Weed and Feed

In addition to poisoning, the EPA warns that, "the potential environmental impacts from pesticide disposal are air, soil, and water contamination from releases and accidental exposure of humans and animals."

The environmental implications concerning improper disposal are the same as for the application process, except that the concentration of the pesticide may be stronger because of the quantity and mass of the disposed pesticide. The disposal of pesticides is a critical process; if not properly conducted it can have immediate, detrimental effects on the environment. The EPA encourages either storing excess pesticides for later use or returning it to the manufacturer for relabeling or reprocessing into other materials.



4. Corrosives

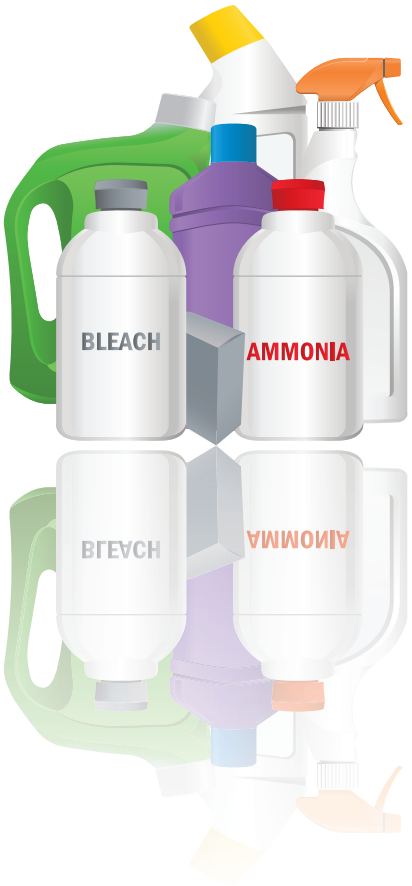
What are they?

A corrosive is any material that can cause skin damage to people or a substance that significantly corrodes metal. A corrosive hazardous material can be either liquid or solid. Corrosive materials can be acidic or caustic in nature.

What's the danger?

Many household cleaners (such as bleach and ammonia) are considered corrosive materials. In addition to potentially causing severe skin damage, certain corrosive cleaning materials (such as toilet bowl or tub and tile cleaner) can be poisonous if ingested. You should always consult the label on the back of the bottle for information about the dangers of the product you are using.

Another danger of cleaning materials is the fumes they give off which can cause significant damage to humans as well as the environment. These fumes can be made worse when different chemical cleaners are mixed, for example, ammonia and bleach. When combined, these two common household items will put off a toxic gas that initially attacks the eyes and mucous membranes. Prolonged exposure can burn the lungs, cause loss of consciousness, respiratory failure, and even death.



Some examples:

- Clorox / Generic Bleach
- Windex with Ammonia
- Formula 409
- Sodium Hydroxide Based Cleaners (non-Aerosol)
- Potassium Hydroxide Based Cleaners (non-Aerosol)
- Liquid Plummer (or any Caustic Drain Cleaners)
- Ammonia
- Hydrogen Peroxide Based Hair Dyes
- Liquid Detergent with Bleach Alternative
- Effodent (Bubbling denture cleaner)
- Teeth whiting strips
- Solid Detergent with Bleach Alternative
- Clorox Wipes with Bleach (any wipes with Bleach)
- Pool Cleaners
- Chlorine Tablets Comet
- Hydrogen Peroxide
- Oxy Clean

5. Cylinders

What are they?

Cylinders are a type of container that generally hold different types of compressed gases such as propane or oxygen.

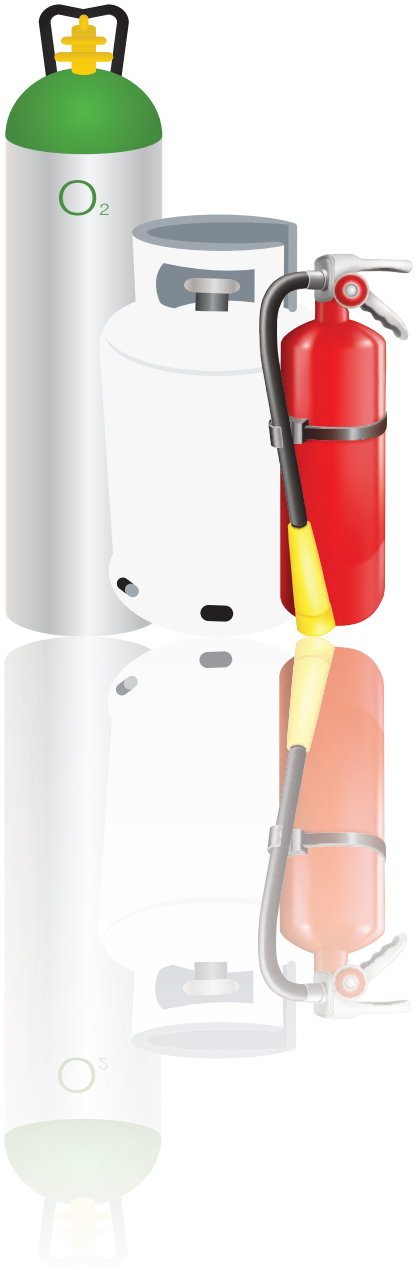
Similar to aerosol cans, the contents of cylinders are usually under pressure and are released in a rapid stream when opened.

What's the danger?

The dangers associated with these are generally combustion or explosion dangers. Because the contents are stored under pressure and because cylinders often contain pure gasses, the risk of fire or explosion from puncturing the cylinder or having it come in contact with a flame is always a danger.

Additionally, cylinders may contain products that pose an environmental or health threat by themselves, propane tanks for example.

Although the dangers decrease when the clinders are empty, it is still best to dispose of the containers at an HHW event.



Some examples:

- Disposable Propane tanks (Small)
- Gas Grill Sized Propane Tanks (Large)
- Mapp Gas
- Oxygen Tanks
- Freon
- Helium Tanks
- Fire Extinguishers - non rechargeable
- CO_2 Cartridges

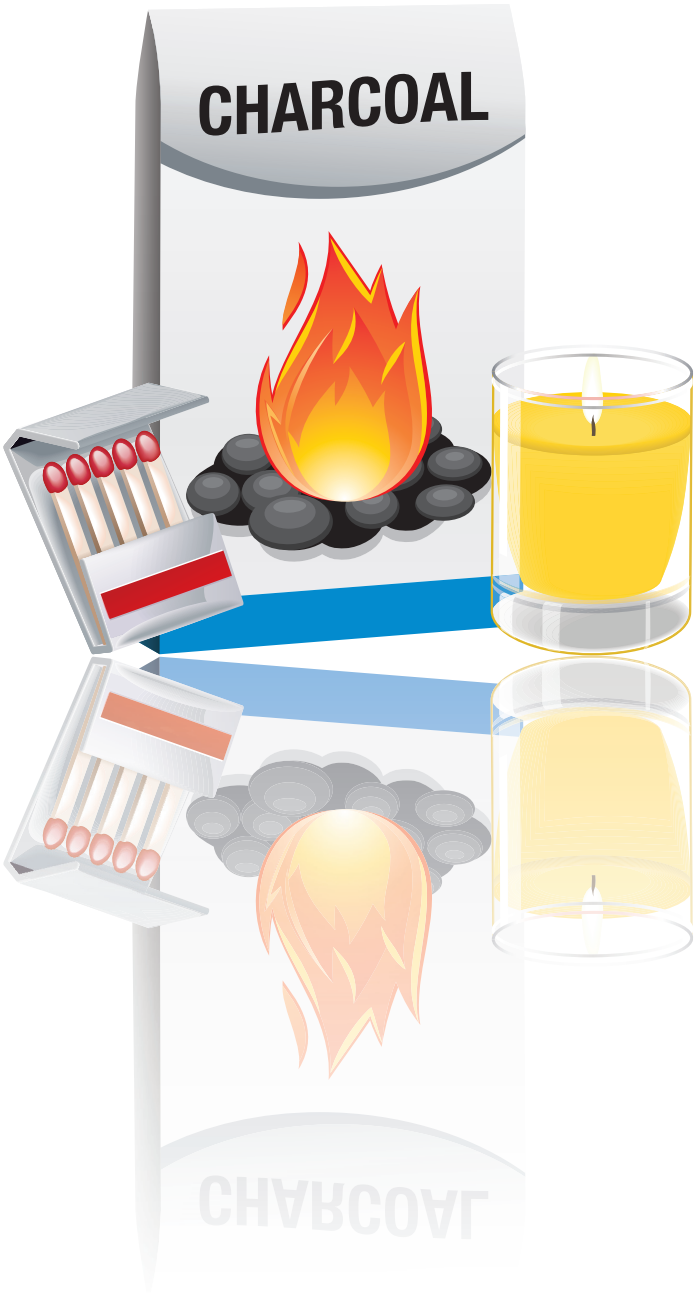
6. Flammable Solids

What are they?

"These are solid wastes that pose a fire threat. Flammable solids [are] materials that have the potential to ignite by friction or heat sources, or by contact with other chemicals."

What's the danger?

The danger associated with flammable solids is that they have the potential to combust. Flammability is one of the more common dangers of household hazardous wastes and must be watched carefully.



Some examples:

- Charcoal (Bagged and palletized)
- Matches
- Charcoal loose in drums
- Candles
- Silicon Based Caulking Products

7. Flammable Liquids

What are they?

A flammable liquid is any substance with a low flash point that ignites at temperatures below 130 degrees Fahrenheit. The flash point is the lowest temperature at which vapors passing from the substance into the air will catch fire spontaneously if a small flame is present. Fuel oil and gasoline are common flammable liquids.

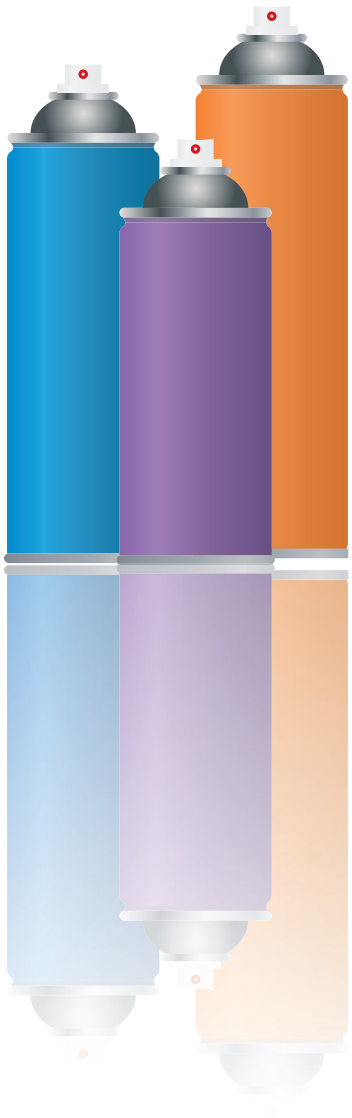
What's the danger?

Like with flammable solids, the primary danger is that the substance could ignite. A secondary danger of flammable liquids, such as automotive fluids, is the risk of poisoning. Antifreeze, for example, is attractive to children and pets because of its sweet smell and taste and is highly toxic.

Many of these items are also somewhat corrosive, automotive fluids again being a good example.

Some examples:

- Liquid Deodorizers and Fragrances
- Cleaners Containing Solvents
- Oil Based Paint and Enamel
- Lubricants
- Oils
- Alcohol Based Photo Fixers
- Waterproofing Sealers
- Non-Aerosol Hair Spray
- Ethyl Alcohol (Hand Sanitizing Products)
- Body Wash with Alcohol
- Pine-Sol Cleaner
- Finger Nail Polish
- Polyurethane/silicone Floor Tile Sealants
- Primers and Adhesives
- Carpet Cleaner
- Sterno
- Perfume or Cologne (Non-Aerosol)
- Brake Fluid
- Engine additives
- Transmission Fluid
- Hydraulic Fluid
- Antifreeze
- Windshield Washer Fluid (Blue)
- Iron Out Cleaner



8. Aerosols

What are they?

As the name implies, this category includes any items that are in aerosol cans. This means that the product is a substance enclosed under pressure and able to be released as a fine spray, typically by means of a propellant gas.

What's the danger?

According to The Integrated Waste Management Board, "hazards associated with aerosols vary greatly, and, depending on the type of product in the container, there is danger of contact with corrosive or toxic materials. The actual product propelled by the aerosol, such as some oven cleaners, can be corrosive, flammable, or poisonous. Many of the propellants used with aerosol products, such as butane or propane, are flammable and may be explosive.

Acute symptoms of aerosol exposure include headache, nausea, dizziness, shortness of breath, throat irritation, and skin rash. A misdirected spray can cause eye injury and chemical burns."

Some examples:

- All Paint Aerosols
- Raid
- Aerosol Based Insecticides and Herbicides
- Aerosol Based Off and Mosquito Spray
- Aerosol Based Sun Screen
- Aerosol Air Fresheners
- Aerosol Mousse
- Aerosol Hair Spray
- Aerosol Deodorant
- Butane Refills / Lighters
- Aerosol Cleaners
- Aerosol Based Oven Cleaners
- Non-Haz Aerosols (Air Dusters)
- WD-40
- Anything in an aerosol based pressurized container
- Tire Inflators
- Flame Out
- Silly String
- Mace/Pepper Spray

9. Unused Medications

What are they?
This can include any old, expired, or unused over-the-counter or prescription medications.

What's the danger?
A common misconception relating to old medications is that because they are approved by the FDA they are "safe." For many years, it was a common practice to simply flush unused medication down the toilet. This practice, however, has been found to be unsafe due to the medication finding its way back into our drinking water.

According to an Associated Press investigation reported in early 2008, "A vast array of pharmaceuticals including antibiotics, anti-convulsants, mood stabilizers and sex hormones have been found in the drinking water supplies of at least 41 million Americans."

Because medications are intended for only the person they were prescribed to, it is important to dispose of them properly.

Some examples:

- Prescription Medications
- Liquid Medications
- Over the Counter Medications
- Capsules
- Tablets
- Inhalers
- Suppositories
- Topical Creams or Ointments
- Eye Drops
- Ear Drops
- Nasal Spray

10. E-Wastes

What are they?

E-waste is a relatively new term used to describe out dated and out of use electronics.

What's the danger?

According to the Marion County ToxDrop Committee, "everything from cell phones to computers needs to be recycled rather than thrown away. Electronics contain hazardous materials such as lead and mercury. These materials, if buried in a landfill, can contaminate groundwater and cause serious health issues for humans."

Some examples

- CPU's
- Keyboards
- Mouse
- Joy Stick Controllers
- Modems
- Printers
- Monitors
- Scanners
- Gaming Accessories
- Cellular Phones
- USB Drives
- Laptop PC's
- External Tape Drive
- External Disk Drives
- Hard Drives
- PC Cards
- Circuit Boards
- PC Speakers
- Microphones

For additional information about these substances and their proper disposal please visit the EPA website.

Additionally, most state websites will have a list of HHW events where these items can be brought to be safely disposed of.

Check with your local municipality for information about what types of items are acceptable at events near you.

SOURCES:

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www.calrecycle.ca.gov/publications/HHW/61200001.doc
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