



Chemical Storage & Safety

Make safe chemical storage and application a priority

Oftentimes, it doesn't take long to accumulate chemicals and cleaning supplies that when stored close together, can be potentially hazardous. They can have an adverse impact on not only humans but on animals and the environment. Here are some simple ways to store products safely.

- **Keep in a safe space:** Dangerous chemicals should not be stored out in the open where children or pets can have access. Using a chemical storage shed is one solution. For an extra layer of safety, keep products in a locked cabinet that has plenty of ventilation.
- **Paints, solvents, and cleaning supplies:** Use proper ventilation every time you use these products and buy only the amount you'll need or use in a limited amount of time. After using, be diligent about resealing these containers and ensure that all bottles and cans have their original labels as well as other clear indicators of what the product is.
- **Store in original container:** A curious child can easily try to drink a dangerous chemical if it is stored in a familiar container such as a soft drink bottle. Always store chemicals in their original containers which are clearly labeled and aren't mistaken for drinkable liquids.
- **Store off the ground:** Never store chemicals on the ground. In the event of heavy rain, flooding, or spillage this would reduce environmental harm. In addition, this should reduce access by pests or animals.
- **Keep the area clean:** Make sure that there are no materials that might contribute to a fire or explosion, or anything that may encourage pest infiltration.
- **Only buy what you need:** Never store a large amount of chemicals in your outdoor building. Buy what you need and make note of when it was purchased. Safely dispose of any unused products by contacting Lane County Waste Management at 541-682-4120 for disposal options.
- **Plan for an emergency:** Everyone knows to call 9-1-1 in an emergency, but you should also have the Poison Control Hotline number, 1-800-222-1222, if a family member or pet ingested a chemical, or if it came into contact with skin or eyes.
- **Safe disposal options:** Schedule a hazardous waste drop off with Lane County by calling 541-682-4120 or visit: Lanecountyor.gov/hazwaste. There is no fee for households to schedule an appointment. Businesses need to complete an application and there is a fee for disposal.



CAUTION

Be advised that products with these ingredients should be handled with great care.

- **Caustic soda (sodium hydroxide)** is commonly used in farming to treat animal feed. It can also be used as a cleaning agent in households and has several uses within a manufacturing facility. Caustic soda should not be stored near any chemical acid.
- **Chlorine** is a common disinfectant that is widely used in swimming pools and fitness facilities. Chlorine should not be stored with ammonia, acetylene, benzene, butadiene, hydrogen, any petroleum gases, sodium carbide or turpentine.
- **Hydrogen peroxide** has multiple uses – in the household, this chemical can be used as a cleaner and in the treatment of wounds. In manufacturing, it can be used in pulp and paper bleaching, and the creation of laundry detergents. Hydrogen peroxide should never be stored with copper, chromium, iron, most metals or their salts, alcohols, acetone, organic materials, aniline, nitromethane, flammable liquids, ammonia or oxidizing gases.
- **Iodine** is often used in schools, universities and several workplaces. Its primary uses are to test for the presence of starch and to serve as a disinfectant. It should not be stored with acetylene, ammonia or hydrogen.
- **Mercury** is used in products such as thermometers and barometers, as well as in fluorescent lamps and dental amalgams. Compounds of mercury are also used to develop certain medicines. Mercury should never be stored near acetylene, fulminic acid or ammonia.
- **Nitric acid** has several different purposes but is commonly used in manufacturing and chemical laboratories to etch metal, as well as being a component of explosives and fertilizers. Nitric acid should be stored away from substances such as acetone, acetic acid, alcohol, chromic acid, aniline, hydrocyanic acid, hydrogen sulfide and any flammable substances.
- **Oxygen** is used in metal cutting, to facilitate oxy-acetylene welding. It is also heavily used in the iron and steel industries, to smelt iron ores into steel. Oxygen is also used for a host of purposes in chemical manufacturing, such as the creation of antifreeze and polyester primers and in several medical applications and in water treatment. Oxygen should be stored away from substances such as oils, grease and hydrogen and any flammable liquids, solids, or gases.
- **Water** is a compound of two chemical substances – hydrogen and oxygen. While it is a very commonly used substance, there are several incompatible chemicals which cannot be stored near water. These include, but are not limited to, acetyl chloride, alkaline and alkaline earth metals, barium peroxide, carbides, chromic acid, phosphorous oxychloride, phosphorous pentachloride, phosphorous pentoxide, sulfuric acid and sulfur trioxide.
- **Zinc powder** is a substance that is widely used in the manufacturing of many products including paint, cosmetics, and batteries. It is also used as a reducing agent and for casting molds. Zinc powder should not be stored near sulphur.

DO NOT MIX:

Acids and bases

Flammables and oxidizers

Water reactives and aqueous solutions

TOP TIPS



Paint Recycling

To recycle excess paint, visit: paintcare.org to learn which businesses will accept leftover paint. If only a small amount of paint is left in the container, open the lid and let it dry out. Once dry, you can dispose of in a garbage can.



Other Tips:

- Always read the labels and follow instructions based on manufacturer's suggestions.
- Keep an inventory of the chemicals you have.
- Material Safety Data Sheets (MSDSs) contain general recommendations for the safe storage of a hazardous product. If an MSDS is not available when you purchase your product, look online and print it out so that you have it available. All products are required to have a signal word on the container indicating any potential risks associated with the use of the item. Least toxic is caution, then, warning and lastly, danger.
- A well-ventilated shed is better for temperature control.
- Chemicals should never be exposed to either extreme heat or cold temperatures for your safety as well as the effectiveness of the chemicals.

For Businesses

An operational permit is required when a business stores, handles or uses any hazardous materials above the quantities listed in section 105.6 of the Oregon Fire Code. Contact the Eugene Fire Marshall's office at 541-682-5411 or visit: eugene-or.gov/343/Hazardous-Materials



Suit up for safety!

Wearing protective clothing and equipment when handling or applying pesticides/chemicals can reduce your risk of exposure. Understanding the toxicity of a product and the potential for personal exposure allows you to lower your risk. At a minimum, protective gear should include eye protection, a long-sleeved shirt, long pants, socks, and closed-toed shoes. If you are handling pesticides, wear chemical resistant gloves. Pesticides can enter the human body in three ways: through the mouth (orally), by breathing into the lungs (inhalation), and, most commonly, by absorption through the skin or eyes (dermally).

For your own health and well-being, and the safety of pets and family members, always follow application instructions and understand any precautions suggested with products you use. Keep a basic first aid kit on hand and know who to call in an emergency.



Eugene Public Works
Stormwater Management



541-682-2739



eugene-or.gov/happyrivers