

January 2023

Winter Safety

Winter storms and cold temperatures can be dangerous. Stay safe and healthy by planning ahead and using the following winter safety tips:

Home

- Install weather stripping, insulation, and storm windows.
- Have your heating system serviced professionally to make sure that it is clean, working properly, and ventilated to the outside.
- Install a battery-operated or battery backup carbon monoxide (CO) detector.

Vehicle

- Check your tires, and replace with all-weather or snow tires, if necessary.
- Keep the gas tank full to avoid ice in the tank and fuel lines.
- Make an emergency kit to keep in your car that includes water, snacks, a first-aid kit, blankets, a flashlight, extra batteries, a portable cellphone charger, and emergency flares.

Outdoors

- Wear layers of light and warm clothing, a wind-resistant coat, waterproof shoes, a hat, gloves, and a scarf.
- Sprinkle sand on icy patches of your porch, driveway, or sidewalk.
- Work slowly when engaged in outdoor tasks, such as shoveling your driveway or removing snow from your car.

Emergencies

- Keep an emergency kit in your home that includes flashlights, extra batteries, a first-aid kit, and extra medicine.
- Stock food that needs no cooking or refrigeration, and keep water stored in clean containers.

Cadmium: Health Effects and Exposure Controls

Cadmium is a metal that's found in the earth's crust. Most cadmium used in the United States is extracted as a byproduct during the production of other metals such as zinc, lead, or copper or recovered from used batteries. Industrial processes where cadmium is extracted include:

- Manufacturing batteries, pigments, coatings and plating's, or stabilizers for plastics.
- Refining metals.
- Landfill operation, recycling batteries, or waste or compost collection.
- Electroplating, metal machining, or welding; *and*
- Painting.

Symptoms of Exposure

If you're exposed to high levels of cadmium, you will start to develop symptoms within 4 to 10 hours that may include:

- Chills
- Fever
- Weakness
- Vomiting
- Diarrhea
- Abdominal pain
- Shortness of breath

Exposure Limits

Due to cadmium's toxicity, the Occupational Safety and Health Administration (OSHA) sets limits for a worker's daily exposure. If cadmium in your workplace meets what is called the "action level," a program that includes air monitoring, medical surveillance, and voluntary respirator use is required. If the level is even higher, then more controls and work practices will be necessary to prevent exposure above the permissible exposure limit (PEL).

Controlling Exposure to Cadmium

To make sure that it doesn't exceed the PEL, your employer will monitor the levels of cadmium in the air in your workplace and must implement engineering controls and/or work practices to limit exposure.

In addition to engineering controls, you may be required to wear personal protective equipment (PPE) to protect yourself from cadmium exposure.

For any PPE you wear, be sure to remove it at the end of a shift in a changing area designated for this purpose, taking care not to shake or blow any cadmium residue from the clothing or equipment. It may also be a good idea to change out of work clothes and shower at the end of the day in order to wash cadmium from your skin and hair.

Safe Work Practices

In areas where cadmium is used, do not:

- Smoke.
- Eat or drink.
- Chew gum or tobacco.
- Apply cosmetics.
- Carry any of these items with you.

Safety with Nonpowered Hand Tools—Screwdrivers and Chisels

Follow these safe practices when using screwdrivers and chisels:

Screwdrivers

- Repair worn, bent, or broken tips, or throw the screwdriver away.
- Grind or file the tip of the screwdriver whenever necessary. It should fit the screw snugly.
- Don't use a screwdriver as a punch, chisel, or nail puller.
- Select the right-size screwdriver to fit the screw.
- For electrical work, use a screwdriver with an insulated handle.
- Use a vise or another support to hold the piece being worked instead of holding it with one hand and using the screwdriver with the other.
- Use an awl, a drill, or a nail to make starting holes for screws.
- Don't force a screwdriver by using a hammer or pliers on it.
- Don't carry screwdrivers in your pockets.

Chisels

- Keep the cutting-edge sharp at all times.
- Repair the chisel head or discard the chisel at the first sign of mushrooming, which can result in hazardous flying particles.
- Select the right-size chisel for the job.
- Use a mallet rather than a hammer whenever possible. Make sure the mallet is the right size for the chisel. Wear goggles when chipping. Shield the work to protect others.
- Chip in a direction away from you, and don't use unnecessary force.
- Hold the chisel toward the work end so your hand won't get the full force of a blow if you miss with the mallet stroke.

These products can easily become contaminated with cadmium from the workplace and can therefore create another source of unnecessary cadmium exposure.

Take the time to understand the dangers of cadmium and cadmium compounds in your workplace and be sure to wear the appropriate PPE and maintain safe work practices to keep yourself and your coworkers safe.



Safety with Nonpowered Hand Tools—Hammers, Pliers, and Wrenches

Follow these safe practices when using hammers, pliers, and wrenches:

Hammers

- Make sure that the hammer head fits tightly.
- Replace cracked heads and loose or cracked handles.
- Use the right hammer for the job (for example, a soft metal hammer on highly tempered tools such as drills or dies; a claw hammer for driving nails).
- Heads should be of proper hardness, so they won't chip or mushroom.
- Grip the handle close to the butt end.

Pliers

- Don't use pliers on a hard metal surface. This will dull the teeth and loosen the pliers' grip.
- Grasp plier handles at the ends, not near the hinge.
- Never use pliers on nuts; use a wrench instead.

Wrenches

- If a wrench is bent, cracked, or badly chipped or has a loose or broken handle, discard it.
- Keep the jaws of the wrench sharp.
- Use the right wrench for the job and be sure it fits snugly on the nut. Never use a shim to make a wrong-size wrench fit.
- If you can't loosen a nut with the wrench you're using, get a larger wrench. Never add an extension to the handle for more leverage.
- Pull the wrench—don't push it. Make sure your footing is secure and allow plenty of clearance for your fingers. Use a short, steady pull.
- Don't pull on an adjustable wrench until it has been tightened on the nut. The jaws should be pointed in the direction of the pull.

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winter
safety
cadmium
exposure
hand
tools
plier
wrench

Eco-Friendly Winter Tips

- Many of the practices we implement during winter, such as spreading salt on icy sidewalks and warming up the car on frigid mornings, can negatively impact the environment. Fortunately, there are simple steps you can take to have an eco-friendly winter season:
- Lower your thermostat. In the winter months, a temperature between 67°F and 70°F is recommended when you're at home. You can also throw on a few layers of clothes to keep you warm rather than increase the temperature of your home, which uses more energy than needed.
- De-ice with caution. Some deicers, such as rock salt and calcium chloride, can pose a hazard to children, pets, and the environment. If possible, look for safer, eco-friendly alternatives such as sand and sawdust that apply traction to icy surfaces without using harmful chemicals.
- Use electric snow-removal products rather than gasoline-powered ones. While electric products consume energy, they do not emit greenhouse gases. As alternatives, use snow shovels and brooms to clear snow from your sidewalk, porch, or driveway.
- Don't idle. Letting your car heat up during cold mornings while you wait inside is tempting, but it creates unnecessary emissions and pollution in the air. Limit idling your car to no more than 3 minutes at most. Bundle up with gloves, a hat, and a scarf before getting into your car.



Safety with Nonpowered Hand Tools—Hammers, Pliers, and Wrenches: QUIZ

1. Grasp plier handles near the hinge, not at the ends. TRUE or FALSE
2. Pull the wrench—don't push it. TRUE or FALSE
3. Which of the following are best practices for using a hammer? Choose all that apply.
4. Replace cracked heads and cracked handles.
5. Make sure that the hammer head fits loosely.
6. Use the right hammer for the job.
7. Grip the handle close to the top end.
8. When should you discard a wrench? Choose all that apply.
 - A. When the jaws of the wrench are sharp
 - B. When the wrench is bent
 - C. When the wrench's handle is too tight
 - D. When the wrench is cracked

ANSWERS

1. FALSE. 2. TRUE. 3. A. & C. 4. B. & D.



Chemical Spotlight: Diethyl Ketone

Diethyl ketone is a colorless liquid with an acetone-like (nail polish remover) odor. It is used in chemical manufacturing and in medicine. Diethyl Ketone is not compatible with oxidizing agents, strong bases, aliphatic amines, reducing agents, mineral acids, and mixtures of hydrogen peroxide and nitric acid.

Store Diethyl Ketone in tightly closed containers in a cool, well-ventilated area away from heat. Sources of ignition are prohibited where Diethyl Ketone is used, handled, or stored. Metal containers involved in the transfer of Diethyl Ketone should be grounded and bonded. Only use non-sparking tools and equipment, especially when opening and closing containers of Diethyl Ketone.

If Diethyl Ketone is spilled or leaked, avoid breathing vapors, mist, or gas, and ensure adequate ventilation. Remove all sources of ignition and evacuate personnel to safe areas. Use personal protective equipment (PPE), including goggles or safety glasses, gloves, flame-retardant protective clothing, and respiratory protection.

Prevent further leakage or spillage if safe to do so, and do not let the product enter drains, sewers, underground or confined spaces, groundwater, or waterways or discharge into the environment. Absorb liquids in vermiculite, dry sand, earth, or a similar material, and deposit in sealed containers. Ventilate and wash the area after cleanup is complete. It may be necessary to contain and dispose of Diethyl Ketone as a hazardous waste. Contact the federal and local Environmental Protection Agency (EPA) for specific recommendations.

Going Green in 2023: QUIZ

1. Glass is the material that most frequently goes into landfills.
TRUE or FALSE
2. Any electronic device with a “standby” or an “instant on” setting is an energy vampire.
TRUE or FALSE
3. Which of the following are single-use plastics that have zero waste alternatives? Choose all that apply.
 - A. Produce bags
 - B. Straws
 - C. Sandwich bags
 - D. All of the above
4. Which of the following personal care products may contain microbeads? Choose all that apply.
 - A. Facial scrubs
 - B. Nail polish
 - C. Eyeliner
 - D. All of the above



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Going Green in 2023: ANSWERS

1. **FALSE.** Paper is the material that most frequently goes into landfills.
2. **TRUE.** Any electronic device with a “standby” or an “instant on” setting is an energy vampire.
3. **D.** All of the above. Produce bags, straws, and sandwich bags are some of the many single-use plastics that have zero waste alternatives.
4. **D.** All of the above. Facial scrubs, sunscreen, and eyeliner are some of the many personal care products that may contain microbeads.

Going Green in 2023

As you're setting your goals for 2023, here are some sustainable New Year's resolutions that can help you make an impact on the environment:

Buy Nothing Day

Invented in September 1992 by journalist Ted Dave, Buy Nothing Day started as a way to protest overconsumption. People then expanded the idea to a no-spend challenge that lasted a month, 6 months, or even a year. While you don't have to take on a monthly or yearly challenge, dedicating at least 1 day to buy nothing is an opportunity to reduce your waste, as well as get your priorities in check, limit unnecessary spending, and save money.

Do A Waste Audit

The next time you go to empty your trash bin, take a look inside. Are there any plastic disposables in there? If so, consider replacing them with a reusable alternative. Some examples are zero-waste razors, produce bags, straws, and sandwich bags.

Donate Or Upcycle

If you're cleaning out your home and are considering throwing away items, instead, try donating them or give them a new purpose. Recycling an item can be practical and useful for others, or it can be repurposed into a fun craft project!

Reduce Paper Towel Usage

According to the Environmental Protection Agency (EPA), paper is the material that most frequently goes into landfills. A transition to a paper towel-less household might be difficult, but you can start by setting a goal to use smaller sheets of paper towel. You can also invest in cloth napkins and then wash them with the rest of your laundry.

Eliminate Phantom Energy

Phantom energy, also known as vampire energy, is the energy used by electronic devices that continue to draw power even though they are “off.” Any device with a “standby” or an “instant on” setting is an energy vampire. You can use smart power strips to save energy and money. Some advanced power strips (APSs) can prevent electronics from drawing power with an automatically timed off switch that can turn all devices plugged into the APS off when you're not using them. There are also chargers that stop drawing energy when a device's battery is full.

Be Mindful of Personal Care Products

Microbeads are present in some facial scrubs, toothpastes, and body washes, but they may also be in lipstick, eyeliner, sunscreen, deodorant, and other personal care products. These plastic microbeads, when released into the ocean, cause harm to marine life and may work their way up through the food chain to harming the human populations that consume marine life. You can visit <http://www.beatthemicrobead.org/product-lists> to see if your product contains microbeads.

Use Eco-Friendly Cleaning Products

To make it easier on the environment and the atmosphere as a whole, try buying eco-friendly cleaning supplies. From biodegradable degreasers to natural dish detergent, there are plenty of options, and popular demand has made them more affordable. These alternatives are also safer for household use.

Use Reusable Batteries

Reusable batteries are a great alternative to traditional batteries. Investing in rechargeable batteries may have a higher upfront cost, but the investment is more sustainable and will save you money in the long run.