

Lifting for electrical contractors— Heavy objects

Overexerting yourself or muscling your way through the work and the stress repeated heavy lifting has on your body are the biggest causes of shoulder and back injuries. Here are some do's and don'ts for lifting heavy objects:

- **Do** use mechanical equipment, such as forklifts or duct lifts, to lift heavy objects.
- **Do** use suction devices to lift junction boxes and other materials with smooth, flat surfaces. The temporary handle makes lifting easier.
- **Do** lift materials at the power zone height. Maintain a neutral and straight spine. Keep your elbows tucked in close to your body and keep the load as close to your body as possible while you lift.
- **Do** use your legs, not your back, when lifting an item from a low location.
- **Do not** twist or bend awkwardly while you lift. Bend at the knees and not at the waist to keep good posture and to keep your spine straight. You are less likely to strain your body when lifting this way.
- **Do not** lift heavy loads that weigh more than 50 pounds by yourself. Have two or more of your coworkers help you lift.
- **Do not** roll spools. Once they are in motion, spools are difficult and dangerous to stop rolling.
- **Do not** carry loads on one shoulder, under an arm, or in one hand.

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EMPLOYEE SAFETY NEWSLETTER

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Dangers of carbon monoxide

Carbon monoxide (CO) is an odorless, colorless, and poisonous gas. Exposure can be deadly. Because you can be overcome by CO quickly and its symptoms can easily be mistaken for less fatal ailments, it's important to be aware of how CO is produced, what happens if you're exposed, and what to do if you have or observe exposure symptoms.

Danger from CO increases with the amount and length of exposure, but any exposure is a health hazard. CO can be a potential problem anywhere that fuel is burned, whether it's at home or at the workplace. And, CO can cause permanent damage to parts of the body that require a lot of oxygen, like the heart and brain. Such injury may not be noticeable for years.

CO is a common hazardous substance. It's produced when organic fuels are burned in an area with a limited supply of oxygen. The most common occurrence is incomplete burning in an airtight building. Often, a motor vehicle or furnace is the culprit. CO is produced by the incomplete burning of any material that contains carbon, including gasoline, oil, propane, natural gas, coal, and wood.

CO is produced in workplaces and homes during the operation of equipment such as furnaces, space heaters, water heaters, gas clothes dryers, gas ranges, fireplaces, and motor vehicles, including forklift trucks. CO becomes dangerous when levels build up because of equipment that is not working properly and/or a lack of venting or air supply.

Factors that increase health risks to those who inhale CO include heart conditions, asthma, and bronchitis. Drinking alcohol, high altitudes, smoking, and hot conditions all increase the health risks for those who have inhaled CO.

Be alert for CO poisoning symptoms—and act quickly. Symptoms may resemble those of the flu, such as dizziness and vertigo, nausea, flushed face, headache, weakness, irritability, sleepiness, confusion, and chest pains for people who have heart conditions. In the event you or someone else is exposed to CO, get to fresh air immediately. Always remember to get medical attention if you think you have inhaled CO.

Keep all fuel-burning equipment and appliances maintained and operating properly. Heating equipment leaks are a common cause of CO poisoning, so be sure furnaces have routine servicing. Also, vent all fuel-burning equipment and appliances outside. Inspect vents to be sure they're not blocked. Check that exhaust fans blow out and away from air intake vents, so they don't bring combustion products back into the building. And, be especially careful in energy-efficient buildings, which may have minimal ventilation.

Don't let vehicles run in an enclosed area. Accidental deaths result every winter from simply warming cars in closed garages. Maintain vehicles properly. Inspect them for exhaust and pipe leaks and body rot, which could allow CO into the vehicle. Use special detectors to alert you to dangerous CO levels, as CO can't be seen or smelled. These detectors will sound an alarm if CO levels are hazardous.

Confined space entrant

As an authorized entrant, who is an employee trained and approved to enter a permit-required confined space by an employer, you need to:

- Be aware of site-specific information about the hazards you may face during entry, including how exposure can occur in the space, the signs or symptoms of exposure, and the consequences of the exposure.
- Follow all safe work practices as outlined by the entry permit.
- Properly use important equipment, including:
 - Ventilating equipment needed to create acceptable entry conditions;
 - Communications equipment necessary for contacting the attendant;
 - Personal protective equipment (PPE);
 - Lighting equipment to allow you to see well enough to work safely and to exit the space quickly in an emergency;
 - Barriers and shields to protect from external hazards; and
 - Equipment needed for safe entry and exit from the space.
- Communicate with the attendant once you enter the permit space to allow the attendant to monitor your status and to alert you if you need to evacuate the space.
- Notify the attendant whenever you recognize a warning sign or symptom of exposure to a dangerous situation or you notice any condition that is not allowed by the permit during entry.
- Exit the permit space as quickly as possible whenever an order to evacuate is given by the attendant or entry supervisor, if you recognize any warning sign or symptom of exposure, if you notice any condition that is not allowed by the permit during entry, or if an evacuation alarm is activated.

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Commercial driver safety—Safe backing techniques: QUIZ

1. You should walk around your vehicle before backing up to check for obstacles. TRUE or FALSE.
2. You should keep the driver's side of the window rolled up. TRUE or FALSE.
3. Which of the following are ways to warn anyone behind you that you are backing up? Choose all that apply.
 - A. Ensure the backup alarm is working properly.
 - B. Turn on flashers.
 - C. Use the horn as necessary.
 - D. All of the above.
4. Which of the following are additional safe backing techniques? Choose all that apply.
 - A. Practice backing up in safe surroundings.
 - B. Rely heavily on your mirrors.
 - C. Proceed slowly when backing up.
 - D. Make use of any safety devices (i.e., rearview cameras).

ANSWERS

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

Commercial driver safety—Safe backing techniques

When backing up a commercial motor vehicle, follow these do's and don'ts to reduce the risk of an accident:

- **Do** walk around your vehicle before backing up to check for obstacles, then quickly return to the vehicle and back up before conditions change.
- **Do** familiarize yourself with your truck's blind spots.
- **Do** roll down the driver's-side window so you can hear honking horns and any other warning sounds that come from outside the vehicle.
- **Do** practice backing up in safe surroundings until you become familiar with the way each truck you drive handles while backing up.
- **Do** use a spotter, particularly if your view of the area behind your truck is obstructed.
- **Do** make sure your spotter is wearing high-visibility clothing, especially when visibility is poor, and that he or she is completely focused on helping you back up and is not distracted.
- **Do** make sure the truck's backup alarm is working properly, turn on flashers, and use the horn as necessary to warn anyone behind you.
- **Do** proceed very slowly while backing up and be prepared to stop at the first sign of trouble.
- **Do** make use of any safety devices on your truck, such as rearview cameras and obstacle-detection systems.
- **Don't** rely too much on your mirrors. While mirrors are a useful tool, they're not a complete view of the entire area behind your vehicle.
- **Don't** allow yourself to be distracted behind the wheel. Turn off the radio, don't use your cell phone, and focus on the task at hand.

Corrosives—Safety practices and emergency response: QUIZ

1. You only need to read the chemical label before working with corrosives. TRUE or FALSE.
2. Which of the following should you do to ensure the safety of your workspace? Choose all that apply.
 - A. Store acids and bases in the same area.
 - B. Make sure to use corrosives that are clearly labeled.
 - C. Check to see if there is adequate ventilation.
 - D. Use universal tools and equipment.
3. Which of the following body parts are especially vulnerable when working with corrosives?
 - A. Hands
 - B. Arms
 - C. Head
 - D. Eyes
4. You must keep containers of corrosives closed when not in use. TRUE or FALSE.
5. Which of the following are appropriate response methods when in contact with a corrosive?
 - A. Follow first-aid instructions on the safety data sheet (SDS), but also get professional medical attention.
 - B. Flush your eyes with water if you get a corrosive chemical in your eyes.
 - C. Take a short shower under high pressure after removing your clothes if your skin comes in contact with a corrosive.
 - D. Induce vomiting if you've ingested a corrosive.

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Corrosives—Safety practices and emergency response

Corrosive materials are highly reactive, unstable substances that pose a serious and immediate risk to your health. When working with these substances, keep these tips in mind:

Know what you're dealing with:

- Read the chemical label that includes a signal word, a pictogram, a hazard statement, and precautionary statements.
- Always check the safety data sheet (SDS), not just the label on the corrosive, so that you can recognize the hazards of the chemical you're using.

You can ensure the safety of your workspace if you:

- Store acids and bases in separate areas.
- Make sure to use corrosives that are clearly labeled, and store them properly, usually in rooms with trapped floor drains to stop any spill from going outside.
- Check to see that there is adequate ventilation.
- Tell your supervisor if the mechanical exhaust systems aren't working.
- Check that the tools and equipment you select are made for use with corrosive materials.

When dealing with containers of corrosives, remember to:

- Keep containers closed when not in use.
- Check containers frequently to be sure there are no leaks.
- Be cautious when you move or open containers.
- Be especially careful when you remove corrosives from containers.
- Follow good housekeeping practices by keeping cigarettes, food, and drinks out of the work area.
- Wash thoroughly after using corrosives.

Use the correct personal protective equipment (PPE)

Proper protective clothing is essential when working with corrosives. Here's what you need to do:

- Always read the SDS to identify the protection you need for whatever corrosive substance you are working with.
- Eyes are especially vulnerable, so use chemical-resistant safety goggles and full-face shields.
- Protect your body from spills or leakage with rubber gloves, aprons, and safety shoes.
- In many cases, you may need a supplied-air respirator or self-contained breathing apparatus (SCBA) for protection.
- Inspect all PPE before you use it and remember to clean or dispose of it properly when you finish using it.

Know how to respond to a spill

If you haven't had special training, don't try to clean up a spill yourself. If a chemical is spilled, it's best to call in the workers who have been trained and warn your coworkers in the area about the spill.

Know how to respond to contact with a corrosive

- Follow the first-aid instructions on the SDS, but also get professional medical attention.
- If your skin comes into contact with a corrosive, remove your contaminated clothing, and wash thoroughly. Immediately follow that with a long shower under low pressure.
- If you get a corrosive chemical in your eyes, flush your eyes with water at the eyewash station for at least 15 minutes, or longer, as indicated on the SDS.
- If you've inhaled corrosive vapors, get to fresh air immediately.
- Don't induce vomiting if you've ingested a corrosive, as that can cause additional damage to your esophagus, throat, and mouth. Get immediate professional help.
- Don't decide that first aid is good enough—follow up with prompt medical attention so that you're not permanently injured from these dangerous substances.

Corrosives—Safety practices and emergency response: ANSWERS

1. **FALSE.** You need to read the chemical label and check the SDS before working with corrosives.
2. **B. & C.** To ensure the safety of your workspace when dealing with corrosives, you should make sure to use corrosives that are clearly labeled and check to see if there is adequate ventilation.
3. **D.** Eyes are especially vulnerable when working with corrosives.
4. **TRUE.** You must keep containers of corrosives closed when not in use.
5. **A & B.** If you come in contact with a corrosive, you should follow first-aid instructions on the SDS, but also get professional medical attention and flush your eyes with water if you get a corrosive chemical in your eyes.

World Soil Day

Each year on December 5, World Soil Day is observed to focus attention on the importance of healthy soil and encourage the sustainable management of soil resources. Plants nurture a whole world of creatures in the soil, which, in return, feed and protect the plants. This diverse community of living organisms keeps the soil healthy and fertile; it is known as soil biodiversity and determines the main biogeochemical processes that make life possible on Earth.

An international day to celebrate soil was recommended by the International Union of Soil Sciences (IUSS) in 2002. Under the leadership of the Kingdom of Thailand and within the framework of the Global Soil Partnership, the Food and Agriculture Organization (FAO) has supported the formal establishment of World Soil Day as a global awareness-raising platform. The FAO Conference unanimously endorsed World Soil Day in June 2013 and requested its official adoption at the 68th UN General Assembly. In December 2013, the UN General Assembly responded by designating December 5, 2014, as the first official World Soil Day.

The FAO's campaign for this year is "Keep soil alive, protect soil biodiversity," which aims to raise awareness of the importance of sustaining healthy ecosystems and human well-being. By urging people around the world to engage in proactively improving soil health, the campaign also aims to fight soil biodiversity loss.

You can visit <http://www.fao.org/world-soil-day> for more information, initiatives, and materials to spread the message of World Soil Day through different multimedia platforms.



Chemical spotlight: Chloropicrin

Chloropicrin is a colorless, oily liquid with a sharp penetrating odor that causes tears. It is used as a fumigant, an insecticide, a fungicide, and tear gas and in making dyes such as methyl violet.

Store chloropicrin upright in tightly closed original containers in a cool, dry, and well-ventilated area. Store the chemical away from sunlight and not near food, foodstuffs, drugs, or potable water supplies.

Chloropicrin is incompatible with amines, aniline, and sodium methoxide, particularly at elevated temperatures. Do not use chloropicrin with PVC, aluminum, magnesium, or their alloys. Mixing it with water may cause the formation of corrosive products over time. Contact with oxidizing and reducing agents, strong acids, or bases may cause fires or explosions.

If chloropicrin 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. For small spills, absorb chloropicrin with materials such as clay, dirt, or sand. Sweep up and collect in suitable and properly labeled containers. For large spills, contact Douglas Products for cleanup assistance. It may be necessary to contain and dispose of chloropicrin as a hazardous waste. Contact the federal and local Environmental Protection Agency for specific recommendations.

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