



"Safety Comes First"

Case Western Reserve University Environmental Health and Safety

Sept-Oct
2024

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The 'Exclamation Mark' Pictogram

The
'Exclamation Mark'
Pictogram

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If you work with hazardous chemicals, you need to take time to read the labels on the chemicals in your work area. On each of these labels, you'll see one or more pictograms.

Confined
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These are the red diamonds with the black pictures on a white background. Pictograms are meant to help you quickly identify the hazards associated with a chemical. There are nine different pictograms that represent different hazards.

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If you see the "exclamation mark" pictogram on a chemical label, it means exposure to the chemical may irritate your skin or eyes or skin contact may cause an allergic reaction. The chemical may cause you to become nauseated or sick but likely won't be fatal. It may cause you to become dizzy or drowsy, slow your reflexes, or reduce your alertness, or it may make it difficult to breathe or cause you to cough. The pictogram can also be used to indicate that releasing the chemical into the air can cause damage to Earth's ozone layer.

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When you see this pictogram, be cautious and do things the right way, which includes following the Precautionary Statements on the label. More specific information on the hazards of a chemical is listed in the Hazard Statement on the label and in the safety data sheet (SDS) for the chemical. The SDS will also give you information on what personal protective equipment (PPE) to use; what to do if you or a coworker is exposed to the chemical; how to safely handle, store, and dispose of the chemical; and how to handle spills and leaks.

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2024-4

Source: Safety BLR

Confined Space Supervisor Responsibilities

Safety.BLR.com®
Safety Training & Compliance Just Got Easier

“Keep all canceled entry permits for at least 1 year.”

There are six core responsibilities that a confined space supervisor must address before any entrant is allowed into a permit-required confined space:

1. Identify the space hazards, including information on how entrants can be exposed to the hazards, the signs or symptoms of injury or exposure, and the consequences of exposure. Brief all entrants and attendants on information about the actual and potential hazards in the space, and review the emergency procedures with them. Make sure they acknowledge that they understand the hazards; that they have all the equipment, including personal protective equipment (PPE), needed to protect themselves from hazards; and that they're prepared to respond in an emergency. Show authorized entrants a copy of the entry permit to confirm with them that pre-entry preparations have been completed.

2. Verify emergency plans and entry conditions, such as permits, tests, procedures, and required equipment, before allowing entry. Make sure the entry permit is current, that all the appropriate entries have been made on the permit, and that all the permit conditions have been met. Make sure that all tests specified by the permit have been conducted and that all procedures and equipment are in place before signing the permit and allowing entry to begin.

3. Terminate entry and cancel permits when entry operations are completed or if a new condition exists in or near the space that's not allowed by the permit. New conditions must be noted on the canceled permit and used in revising the permit space program. Keep all canceled entry permits for at least 1 year.

4. Ensure entry operations remain consistent with the entry permit and that acceptable entry conditions are maintained. Don't deviate from your established procedures. Make sure there's adequate and continuous monitoring of all conditions in the space. If conditions in the space can't be maintained as prescribed in the entry

Confined Space Supervisor Responsibilities, cont.

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permit and confined space program, evacuate the space until entry conditions can be returned to a safe and verifiable state.

5. Verify that trained rescue services are available at the time entrants go into a confined space and for the duration of the entry.

Evaluate your designated rescue and emergency service to make sure it can respond to a rescue summons quickly and perform rescue tasks proficiently, is properly equipped, and can reach victims within a time frame appropriate for the permit space hazards. Also verify that the communication system for contacting the rescue team is working. If you're relying on local emergency services for rescue, arrange for the services to give you advance notice if they won't be able to respond for a period of time for any reason. If they aren't available, don't allow entry, and if workers have entered the space, remove them until the rescue services are available again.

6. Take appropriate measures to remove unauthorized entrants.

There are instances when unauthorized people will try to enter a confined space, especially during an emergency if someone unauthorized and untrained attempts a rescue. Make sure your entry permit and permit space program has written procedures for removing unauthorized people from the space and that you're prepared to do so quickly.



“Make sure your entry permit and permit space program has written procedures for removing unauthorized people...”

Energy Efficiency Day



*“A
washing
machine
spends
90% of its
energy to
heat
water”*

Energy Efficiency Day is celebrated annually on the first Wednesday of October and is a joint effort of energy efficiency advocacy groups around the United States. This year’s observation will be on October 2, 2024. Since the inaugural Energy Efficiency Day in 2016, this annual awareness event has been supported by hundreds of organizations, companies, and government agencies. The goal of Energy Efficiency Day is to share tips, tools, and stories that promote the multiple benefits of energy efficiency, including meeting energy needs, cutting consumer bills, and reducing pollution.

Here are some ways you can be more energy-efficient on this year’s Energy Efficiency Day and throughout the year:

Use LED light bulbs. They last at least 25 times longer and consume up to 90% less electricity than incandescent bulbs. Additionally, try using natural light when possible, particularly in the winter, as the sun can help heat up your home.

Turn the electronics off. Turn off unnecessary lights, appliances, and electronics, and always turn off the lights when leaving a room. Lighting accounts for about 12% of a typical residential utility bill. A power strip can help turn off multiple items at once.

Adjust your thermostat. Set your thermostat to 78°F in the summer and 68°F in the winter. Every degree of extra heating or cooling will increase energy usage by 6% to 8%. Consider installing a programmable thermostat and setting the temperature according to your schedule.

Dress for the weather. When you’re at home, dress in warm clothing in the winter and cooler clothing in the summer to stay comfortable without making your heater and AC work harder.

Clean your clothing efficiently. A washing machine spends 90% of its energy to heat water. Consider using cold water and air-drying your clothes instead.

Air-seal your home. Heating and cooling account for almost half of a home’s energy consumption. All the small leaks can be equivalent to leaving open a 3-foot-by-3-foot window. Sealing cracks, gaps, and leaks and adding insulation can save up to 10% on home heating and cooling costs.

Clean your dishes efficiently. Avoid the “rinse hold” cycle on your dishwasher, and skip heated drying. Open the door at the end of the washing cycle to let them air-dry instead.

Maintain your heating, ventilation, and air conditioning (HVAC) system. Make sure to clean or change your furnace filters regularly. Dirty filters make your system work harder and run longer than necessary.

Look for the ENERGY STAR label. ENERGY STAR-labeled heating and cooling systems, appliances, water heaters, lighting, building products, and electronic devices consume less energy and significantly cut consumer costs.

You can spread the word with friends and family about Energy Efficiency Day across social media with the hashtag #EEDay2024. To learn more about energy efficiency, visit www.energyefficiencyday.org.

Hand Protection – Selecting Chemical-Resistant Gloves

Before working with a new chemical, the first thing you should do is review the safety data sheet (SDS). The SDS will tell you the characteristics of the chemical, the hazards the chemical poses, and the right type of glove material to protect yourself. Information on personal protective equipment (PPE), including gloves, can be found in Section 8 of the SDS.

Manufacturer ratings. The glove manufacturer will list a characteristic known as the breakthrough time for various chemicals, which is the length of time between initial contact with a chemical and detection of that chemical on the inside of the glove. Make sure you select a glove with a breakthrough time longer than the time you'll be working with the chemical. Higher chemical concentrations and higher temperatures will generally shorten the breakthrough time, so adjust your glove selections to account for this.

Two other manufacturer-listed characteristics to consider are the degradation rating and the permeation rate. Degradation is the change in a glove's physical properties in response to contact with a chemical, such as shrinkage or cracking. The permeation rate is the rate at which a chemical passes through a glove material. These are both chemical-specific. Select a glove with the appropriate ratings for the chemical(s) you're using.

Breakthrough time, degradation rating, and permeation rate can be found in the glove manufacturer's chemical resistance guide.

Common glove materials. The following are some common types of glove materials:

Butyl: Butyl is a synthetic rubber that works for a variety of chemicals, including ketones, esters, alcohols, most inorganic acids, and caustics.

Latex: Latex is a natural rubber that protects against most acids and



“The glove manufacturer will list a characteristic known as the breakthrough time for various chemicals.”

Hand Protection-Gloves, cont.

“Silver shield gloves resist break-through by more chemicals than any other material.”

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caustics, salts, detergents, and alcohols. However, many solvents will break latex down, so you should select a different material if you're using solvents. Some people can develop a sensitivity or an allergic reaction to latex.

Neoprene: Neoprene is a synthetic rubber with good protective qualities against a variety of chemicals, such as oils, acids, caustics, and some solvents.

Nitrile: Nitrile protects against a number of acids and caustics, as well as some solvents and fuels.

Polyvinyl chloride (PVC): Gloves coated with PVC have good protection against some solvents, oil, and grease, as well as acids and caustics.

Polyvinyl alcohol (PVA): PVA gloves protect against aromatics, ketones, and chlorinated solvents.

Viton: Viton works well against aromatics, hydrocarbons, chlorinated solvents, ketones, acids, and amines.

Silver shield gloves: Silver shield gloves resist breakthrough by more chemicals than any other material.

Other characteristics

Characteristics besides glove material are also important. For example, if you'll be immersing your arms in a chemical, you'll want gloves that come up to your elbows or higher, but if you'll only be applying the chemical with a rag, gloves that cover just your hands may be sufficient. If the work you're doing requires a lot of manual dexterity, you'll want thinner gloves, but they still must be protective enough for the chemicals you're using. Finally, make sure you take into account other hazards of the task, such as sharp objects or high temperatures.

Source: Safety BLR

Chemical Spotlight: Pentachloroethane

Pentachloroethane is a colorless liquid with a sweetish chloroform-like odor. It's used as a solvent for oil and grease, in metal cleaning, and in the separation of coal from impurities.

Pentachloroethane must be stored to avoid strong bases, chemically active metals, and lithium. The chemical isn't compatible with oxidizing agents, nitrates, and water. Store the chemical in tightly closed containers in a dry, cool, and well-ventilated area. Sources of ignition are prohibited where pentachloroethane is used, handled, or stored.

If pentachloroethane 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

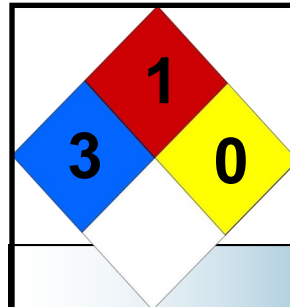
(PPE),
safety



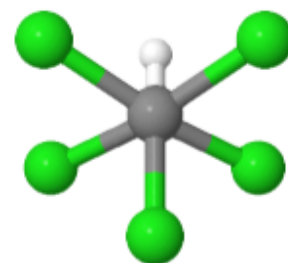
protective equipment including goggles or glasses, gloves, flame-retardant protective clothing, and respiratory protection.

or
and don't 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 pentachloroethane as a hazardous waste. Contact the federal



“...avoid breathing vapors, mist, or gas, and ensure adequate ventilation.”



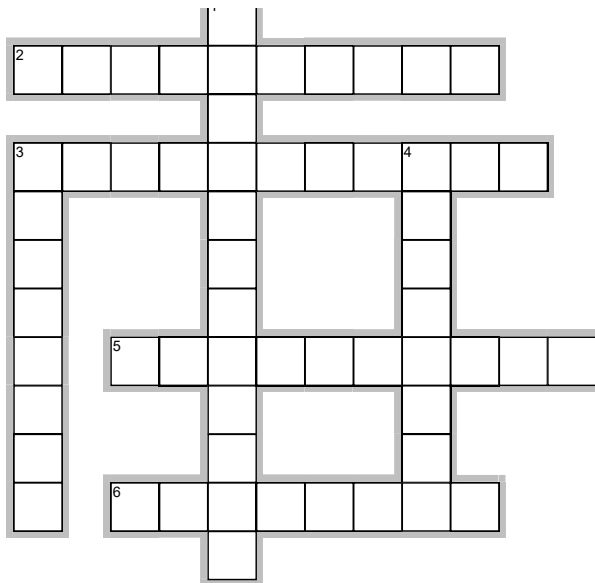
Fun Page

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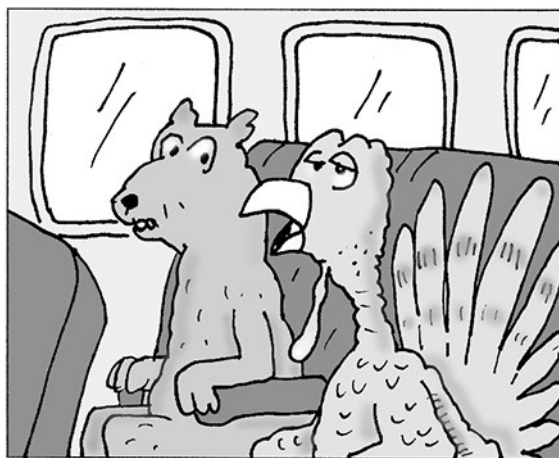
- The confined space _____ must brief all entrants and attendants on information about the actual and potential hazards in the space.
- The _____ mark pictogram indicates that a chemical that may irritate your skin or eyes or skin contact may cause an allergic reaction.
- The _____ rate is the rate at which a chemical passes through a glove material.
- _____ accounts for about



Down

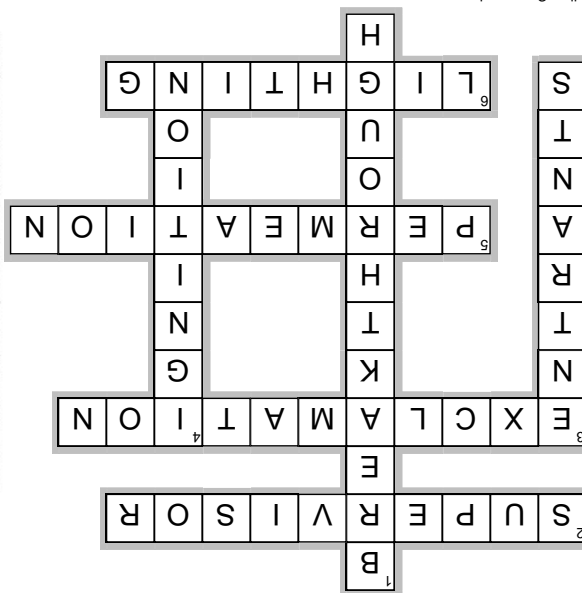
- Make sure you select a glove with a _____ time longer than the time you'll be working with the chemical.
- The confined space supervisor must take appropriate measures to remove unauthorized _____
- If pentachloroethane is spilled or leaked, remove all sources of _____, and evacuate personnel to safe areas.

Funny Corner



"There are so many pressures around the holidays. Buying gifts... Decorating... Getting beheaded, stuffed and roasted..."

Puzzle Answers



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Safety Quotes

*Hug your
kids at
home,
but belt
them in
the car.*

*~Author
Unknown*

All back issues of the EHS Newsletter can be found online at

case.edu/ehs/about/newsletters

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