



GOALS

This safety session should teach employees to:

- Understand the need for hazardous materials storage precautions.
- Know how to determine and reduce hazmat storage risks.

Applicable Regulations: 29 CFR 1910.101, .103, .104, .106, .109, .176, .1200



1. Hazardous materials can be hazardous even in storage.

If exposed to the wrong conditions or substances, they may:

- Catch fire or explode
- Release pressure
- Release gases or vapors that could cause illness if inhaled
- Cause skin or eye burns on contact

2. The Occupational Safety and Health Administration (OSHA) regulates storage of hazardous materials.

- Standards specify storage requirements for particular types of hazardous materials.
 - Larger quantities often require separate buildings or outdoor storage.
 - Regulations may require specific storage area design and materials, ventilation, drainage, or diking to prevent spills from spreading, etc.
- Hazard communication labels and safety data sheets (SDSs) cover storage requirements.
 - Substances may have to be kept away from heat, air, water, or certain other substances to prevent fires, explosions, or releases of dangerous gases.
- OSHA's materials handling regulation requires all storage areas to:
 - Have containers stacked so they're stable and don't create hazards.
 - Be free of materials that could cause tripping, fire, explosion, or other hazards.
 - Have clear aisles and passageways.

3. Follow SDS instructions for safe chemical storage.

In addition to special storage requirements, SDSs should reveal a chemical's safe temperature range, ventilation needs, and substances or conditions to avoid under:

- Physical and chemical hazards
- Fire and explosion hazards
- Reactivity (incompatible substances/conditions, causing instability)
- Health hazards (what could happen if the substance is inhaled, comes in contact with skin, etc.)

4. Flammable liquids have detailed storage requirements.

To prevent them from burning, OSHA's requirements include:

- Specific design and material for aboveground tanks, separate buildings and storage areas.
 - Only small quantities can be kept in buildings with mixed uses.
- Storage aisles wide enough for fire equipment.



- Fire walls to separate inside storage areas from other parts of the building.
- Storage containers made of metal, with emergency vents.
- Keeping containers closed when they're not being used.
- Keeping stacked containers at least 3 feet from beams, sprinklers, or other overhead fixtures.
- Banning open flames, and other ignition sources from the storage area.

5. Take informed safety precautions with hazardous materials storage.

- Read container label and SDS before storing or handling hazardous materials.
 - Use personal protective equipment (PPE) listed on the SDS.
- Read and obey hazardous materials storage area warning signs.
 - Enter limited-access areas only if you're authorized and equipped.
- Don't smoke in or around hazardous materials storage areas.
- Don't use sparking tools or anything that could cause ignition in the storage area.
- Transfer liquids from one container to another only in an assigned ventilated area away from other operations.
- Keep the storage area neat and aisles clear.
 - Dispose of trash properly, placing flammables in covered metal containers.
- Report any container holes, rust, leaks, or missing or illegible labels.
- Know where to find and how to use fire extinguishers.
- Get immediate first aid if exposed to a hazardous substance.



DISCUSSION POINTS:

Identify hazardous materials storage areas in your facility and ask participants what precautions they require.



CONCLUSION:

- Hazardous materials require safety precautions even when stored.
- Know where and how to store hazardous materials. Follow all precautions to prevent fires, explosions, and dangerous releases of and exposures to hazardous materials.



TEST YOUR KNOWLEDGE:

Have your employees take the Hazardous Materials Storage quiz. By testing their knowledge, you can judge their ability to store these materials safely and whether they need to review this important topic again soon.



HAZARDOUS MATERIALS STORAGE QUIZ

- 1. Improperly stored hazardous materials may burn, explode, release pressure or dangerous gases.**
a. True b. False
- 2. The Occupational Safety and Health Administration (OSHA) doesn't have any special hazardous materials storage requirements.**
a. True b. False
- 3. A hazardous chemical's storage requirements may be included in its:**
a. Container label
b. Safety Data Sheet (SDS)
c. Both a and b
- 4. OSHA requirements for all storage areas include:**
a. Using only halogen lights
b. Keeping areas neat and clean, with clear aisles
c. Entering only in groups of three or more
- 5. Useful storage information on an SDS should include:**
a. What substances or conditions to avoid to prevent dangerous reactions
b. Who manufactured or distributed the chemical
c. How many companies have had accidents with the chemical
- 6. Flammable liquid storage in buildings used for other purposes:**
a. Is never permitted by OSHA
b. Is permitted for small quantities, separated by fire walls
c. Is permitted only when a fire department is within a mile of the building
- 7. One thing you never do in a hazardous materials storage area is:**
a. Breathe
b. Talk
c. Smoke
- 8. Some hazardous material storage areas may be entered only by authorized people.**
a. True b. False
- 9. You never need personal protective equipment (PPE) in a storage area because all materials are in containers.**
a. True b. False
- 10. It's important to report any hazardous materials containers that:**
a. Have holes, rust, or other damage
b. Aren't full
c. Are too heavy to lift

When you have completed this quiz, turn it in to your supervisor.

Name: _____

Date: _____



ANSWERS TO HAZARDOUS MATERIALS STORAGE QUIZ

1. a. True.
2. b. False. OSHA standards include detailed requirements for storage buildings, tanks, and areas, including placement, construction materials, etc.
3. c. Both a (container label) and b (SDS).
4. b. Keeping areas neat and clean, with clear aisles.
5. a. What substances or conditions to avoid to prevent dangerous reactions.
6. b. Is permitted for small quantities, separated by fire walls.
7. c. Smoke.
8. a. True.
9. b. False. If a substance's SDS lists PPE, use it in that substance's storage area.
10. a. Have holes, rust, or other damage.