



Compressed Gas Cylinder Safety Talk

From barbequing at home on your propane grill to welding at work using acetylene and oxygen, compressed gases are all around us. Whether we realize it or not, compressed gases are extremely dangerous and account for many serious and fatal incidents each year. From explosions, fires, chemical burns, and asphyxiation, there are many ways one can fall victim to a compressed gas incident. Fortunately, with safe work practices and understanding the related hazards, many incidents involving compressed gases can be prevented. This safety talk reviews some of the best practices and precautions to take while working with or near compressed gases.

General Safety Precautions

- Each gas cylinder must be clearly identified. Never rely solely on the color of the tank.
- Depending on what your employer requires, safety glasses, face shields, heavy-duty gloves, and protective footwear must be worn while handling and connecting gas cylinders.
- Each type of compressed gas presents unique hazards the user must be aware of. Always read labels on the cylinders and refer to the gases Safety Data Sheet ("SDS") for more safety information.

Working with Compressed Gases

- Never smoke around compressed gases and keep cylinders away from all open flames, sparks, excessive heat, and electrical circuits.
- Cylinder valves should be opened slowly and remember to never fully open valves.
- Open valves by hand unless a specific tool is recommended by the supplier. In the case a special tool is required to open or close valves, leave it on the cylinder while in use so the valve can be closed quickly during an emergency.
- If defects or unsafe conditions exist, do not use the cylinder and notify a supervisor immediately. Company lockout/tagout procedures should be followed to prevent others from using the damaged equipment.
- Never attempt to repair a cylinder or valve.
- Cylinders should never be bled below 25 psi.
- Never use compressed gases for purposes outside of their designated use. Horseplay can lead to serious injuries or death.
- Safety devices shall remain in place and must not be tampered with.
- Never attempt to mix or transfer gases from one cylinder to another.



- Do not expose gas cylinders to oil or grease. Depending on the contents, this can cause a violent reaction.

Storing Compressed Gas Cylinders

- All cylinders must be stored in an area at least 20 feet from combustible materials.
- The storage area should also be dry, well ventilated, and free from vehicle traffic. Avoid storing in lockers as they could contain the gas resulting in a dangerous buildup.
- Always fully close the cylinder valves and caps when not in use.
- At least 20 feet must be maintained between flammable gases and oxygen cylinders. The exception to this rule is if a firewall meeting OSHA's requirements is separating the two. Check with your employer if you are not sure.
- Store cylinders in an upright position and secure them with a chain or cable.
- Some compressed gases, such as acetylene, should never be stored on their side.
- Keep empty cylinders away from full ones.

Transporting Compressed Gas Cylinders

- Cylinders must be transported in an upright position unless otherwise stated by the supplier.
- Rolling and dragging cylinders is prohibited. A wheeled cart must be used when moving gas cylinders.
- Only one cylinder should be moved at a time.
- Avoid dropping, sliding, or otherwise disturbing the contents and damaging the cylinder.
- Do not lift cylinders by their caps or guards.

Summary

Working with compressed gas cylinders presents unique and serious hazards. Employees must be aware of the hazards that exist and take active measures to prevent incidents. Through routine maintenance, daily inspections of all equipment, proper use, proper transporting and storage of compressed gas cylinders, many incidents can be prevented. If at anytime an unsafe working condition is identified, employees must report this to a supervisor immediately. Defective equipment must be replaced immediately.

Discussion points:

1. How should compressed gas cylinders be transported?
2. Name four safe working practices while using compressed gases.