



Pannier Corporation

Health and Safety Handbook

Marking System Group



Compressed Gas Cylinders

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Purpose: The purpose of this training module is to:

- To identify the hazards posed by compressed gas cylinders
- To train employees on the proper use handling and storage of compressed gas cylinders
- Know how to move or transport cylinders
- Know proper storage procedures

1. Hazards of compressed gas cylinders

- Gases are chemically hazardous: they may be corrosive, toxic, flammable, or react with other gases.
- High-pressure cylinders present their own unique hazards:
 1. They're potential explosives
 2. Diffusion of leaking gases can result in a toxic environment, asphyxiation, or explosive concentrations of flammable gas
 3. Lower ignition points make fire and explosions more likely
 4. Lower boiling points of certain gases can cause frostbite

2. Before you start:

- Ensure cylinders are labeled legibly; never work with unidentified cylinders
- Visually inspect cylinders for damage or leakage
- If a cylinder cap cannot be removed by hand, the cylinder is to be tagged "Do Not Use" and returned to the designated storage area for return to the vendor
- Only use appropriate tools to open and close cylinder valves
- Notify supervisor if unable to identify contents or if cylinder appears damaged or leaking
- Review MSDS for specific hazards, special handling instructions, emergency response and first aid information
- Wear all required PPE (Personal Protection Equipment)

3. To properly move or transport cylinders:

- Use cylinder cart/hand truck and always secure cylinder with chain or strap
- Make sure protective caps are in place
- Never lift a cylinder using its protective valve caps
- Never roll, drag or drop cylinders or allow them to strike each other
- Never transport with regulator installed

4. For safest use

- Make sure you're using the proper regulators and fittings for each type of gas
- Never use a cylinder without a regulator
- Never attempt to force a connection or modify fittings
- Make sure all lines are secured tightly
- When opening valve, stand to the side and open slowly
- Perform leak check whenever cylinder is reconnected and notify supervisor if leaks are present
- Never attempt to repair yourself
- Keep cylinder in an upright position at all times
- Close cylinder valve when not in use; never leave open cylinder unattended
- Never direct gas toward co-workers or use in place of compressed air
- Never put oil or grease in valve
- Never fully empty cylinder
- Never refill cylinder



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- Never discard empty cylinder in normal trash
- Cylinders that are no longer needed will be marked appropriately for disposition

5. Cylinders must be stored:

- In compatible groups: separate flammables, corrosives and oxidizers and full cylinders from empties
- In upright position with caps on and secured with straps or chains
- In a well ventilated area
- Away from heat sources, readily ignitable substances, electrical wiring, corrosive chemicals and fumes
- Away from traffic lanes and exits