



# COMPRESSED GAS CYLINDER SAFETY



## Potential Gas Cylinder Hazards

- Displacement of oxygen
- Flammable
- Toxic
- Corrosive
- Oxidizing
- Explosive
- Physical Hazards due to its heavy weight, large size, and high pressure



## Accidents can occur due to:

- Improper storage
- Unexpected release or leak
- Incorrect installation
- Damage to tools and/or cylinder
- Poor inspection and maintenance
- Insufficient training



## Personal Protective Equipment (PPE)

- Safety glasses or goggles
- Face shield for liquified gases and cryogenic liquids
- Lab coat
- Gloves as determined by hazard assessment
- Hard-toed shoes when moving or transporting cylinders

## General Safety Guidelines



Complete ISU Laboratory Safety: Compressed Gas Cylinders training, along with any site-specific training for your laboratory. Consult the ISU Gas Cylinder Safety Guidelines as needed.



Read the safety data sheet to understand the chemical and physical properties of the gas.



Ensure gas regulators are properly installed and tightened. Use appropriate regulators – consult the cylinder supplier for more information if needed.



Transport cylinders secured to an appropriate cart.



Secure cylinders to the wall with a chain or appropriate belt above the midpoint but below the shoulder (~2/3 height).



Close valves and cap cylinders when not in use.



Store in an upright position within a well-ventilated area, segregated by compatibility.

# NEVER

- Store in exits or egress routes, damp areas, near salt/corrosives, or with incompatible chemicals.
- Store longer than one year without use.
- Transport cylinders in your personal vehicle.
- Ride in an elevator with a compressed gas cylinder.
- Use Teflon tape on cylinders or tube fitting connections.
- Attempt to open a corroded valve.
- Use cylinder gas as compressed air source.

**Compressed Gas Cylinder Guidelines:**  
<https://go.iastate.edu/MWURY>

