

OVERVIEW OF FACT SHEET

The purpose of this fact sheet is to inform the campus community about the hazards and safety controls associated with compressed gas cylinders.



What are the types of compressed gas cylinders?

There are many types of compressed gases; however, this fact sheet will focus primarily on compressed gases that are non-liquefied such as helium, nitrogen, oxygen and argon.

Where do I obtain additional information?

The EHS office
If you have any questions, please contact the [Environmental Health and Safety Office](#) at 704-687-1111. We can provide training, emergency preparedness and onsite compliance consultations. For specific information, please review the Compressed Air and Gas Program on EHS website.

Compressed Gas Cylinders

What are some of the potential hazards of compressed gas cylinders?

- Explosion and fire hazards
- May create a toxic environment
- Oxygen displacement
- A ruptured cylinder may cause property damage and/or personal injury

What can you do to control these hazards?

- Contact EHS prior to ordering a compressed gas cylinder to review activities and ensure adequate controls are implemented.
- Inspect all cylinders (visually for dents, bulges, cracks, hoses, regulator etc.) prior to use.
- Ensure employees have been trained on how to use compressed gas cylinders.
- Segregate empty and full cylinders.
- Segregate incompatible gases.
- Ensure that the correct pressure regulator is in use.
- Store compressed gas cylinders in a cool, dry, well-ventilated, fire resistant area (keep out of direct sunlight).
- Ensure cylinders are secured upright to avoid tipping over or rolling (i.e., chained, holding cage(s), or sturdy straps).
- Ensure empty cylinders are labeled "EMPTY".
- Keep all cylinders capped when not in use.
- Keep oxygen stored away from all flammables, oil products, and grease (at least 20 feet away).
- Fuel gases and oxidizers must be separated by at least 20 feet, or a noncombustible wall at least 5 feet high with at least a half-hour fire rating.
- Never vent flammable gases inside a building.
- Ensure regulator valve is shut before installing on a cylinder.
- Use 30 psi or less when using compressed air for cleanup.
- Never use compressed air to clean off your clothing or yourself.
- Do not smoke near a compressed air or gas cylinder.
- Open cylinder valve slowly, and never fully open cylinder valve.

How should you transport a compressed gas cylinder?

- Regulators must be removed.
- Valves must be in the closed position and valve caps must be on.
- Do not drag or roll cylinders horizontally.
- Do not lift cylinders by their valve cap.
- Secure cylinders in a cart or a hand truck specifically designed for cylinders. Chain (secure) the cylinder and move to a new location.

What type of Personal Protective Equipment (PPE) must be worn?

- Safety glasses must be worn at all times.
- Use face shields and other required PPE for cryogenic gases.
- Always refer to Material Safety Data Sheets (MSDS) and/or Safety Data Sheets (SDS) for the necessary required PPE.