



COMPRESSED GASES

STANDARD OPERATING PROCEDURES



GENERAL SUMMARY

Compressed gas cylinders are **pressure vessels** used to store gases at or above atmospheric pressure. Cylinders are associated **both** with **physical** (projectile/explosive) and **chemical hazards** (flammable, oxidizer, toxic, asphyxiant, etc). Always **consult the Safety Data Sheet** of the specific gas or mixture for the process in question follow SOP's of any additional hazards.

PLANNING CONSIDERATIONS

- Use a less hazardous gas, if possible.
- Purchase the **minimum amount** needed.
- **Do not work alone** unless approved.

ENGINEERING CONTROLS

- Use in a **well-ventilated** area or in a certified & well-functioning **chemical fume hood**.
 - Call EHS & EM for an evaluation, if needed.
- Consider a **ventilated gas cabinet** for storing toxic/flammable/oxidizing gas cylinders.
- Ensure all equipment (tubing, valves, etc) is **rated for the correct pressure and cylinder content**.



ADMINISTRATIVE CONTROLS

- Ensure all lab workers receive **lab-specific training**.
- **Don't refill cylinders**- contact the vendor if needed.
- Don't leave open cylinders unattended.
- When not in use, **close valves, remove regulators, and re-attach the safety cap**.

REQUIRED PPE

- Proper lab attire required.
- Close-toed shoes required.
- Safety glasses required.
- Consider additional PPE for other hazards associated with the gas



STORAGE REQUIREMENTS

Storage area should be:

- Free of heavy traffic
- Free of excessive heat
- Free of electrical components that could spark.
- **Labeled** for compressed gases and additional hazards
- Separated by hazard class
- Well ventilated (**No confined areas/cold rooms**)

SECURE YOUR CYLINDERS!

Cylinders must be secured to a bench or wall with a chain or strap **between the shoulder and midpoint**. Cylinders should be secured individually or in a corral.



WASTE DISPOSAL

- Coordinate with vendors to return empties or partially filled cylinders.
- **Mark cylinders as "empty" promptly**. Keep cylinders separated by hazard class whether full or empty.

EMERGENCY CONTACT INFO

Appalachian Police Department...(828) 262-8000
EHS & EM.....(828) 262-4008
Watauga Medical Center.....(828) 262-4100
Poison Control Center.....(800) 222-1222

