Compressed Gas Safety

Types of gases in our department

Non-flammable, non-toxic gases
- Causes asphyxiation by displacing O₂. Can explode if heated.
- N₂, Ar, He, CO₂

Toxic/corrosive gases
- Harmful/fatal if inhaled or in contact with skin. Chemical asphyxiant.
- NH₃, HCl, H₂S, CO

Flammable gases
- Gases or gas mixtures that are ignitable. Lighter than air, low flash point (sensitive to static spark).
- CO, H₂, C₂H₂ (acetylene)

Oxidizing gases
- Any gas which causes or contributes to the combustion of other materials; some of these gases decompose exothermically.
- O₂, NO, NO₂

Use and storage of compressed gas cylinders

When using a cylinder, ALWAYS:
- Use a proper carrier or cart with a restraining device
- Use the buddy system when changing hazardous gas cylinders
- Use an empty, in use, full tag
- Use regulators approved for the specific gas you’re using

When using a cylinder, NEVER:
- Move more than 5 ft. without a carrier
- Use Teflon tape or thread sealant on cylinders
- Try to catch a falling cylinder
- Get in an elevator with a full/in use cylinder

When storing a cylinder, ALWAYS:
- Have a cylinder cap in place unless in use
- Secure all cylinders to a wall in designated areas with chains and/or straps
- Position tanks so labels are visible

When storing a cylinder, NEVER:
- Keep incompatible gases together (e.g. flammable and oxidizing)
- Expose the cylinders to corrosive materials
- Store cylinders more than 3 years
- Expose to temps above 52°C

Closing Caps can prevent a cylinder from becoming a Torpedo!

The joint between the gas valve and the body is the weak part of cylinders and the most vulnerable to impacts. In the case of an impact, having a closed cap will release the gas from the tank evenly through two opposing holes without creating a dangerous projectile. It’s a simple rule that can easily prevent a serious accident!