



# safety focus

## Compressed Gasses

Compressed gases can be hazardous. Labels on cylinders and Material Safety Data Sheets (MSDS) supplied with the gas tell you about these hazards. In addition to the gas hazards, compressed gas cylinders are hazardous simply because they contain gas under pressure. These include containers of air, carbon dioxide, nitrogen, oxygen, and others.

To prevent dangerous situations, the following are general procedures to follow for safe storage and handling of a compressed gas cylinder:

- Store cylinders properly. You must protect the cylinders from being struck by another object and each other. Storage areas must be at least 20 feet away from highly combustible materials, and oxidizers must be stored at least 20 feet away from flammable gases.
- Cylinders must not be dropped or allowed to fall. Chain or strap them in an upright position during use or storage. Horizontal storage is allowed in approved racks. When transporting cylinders, they must be secured from falling.
- When moving a cylinder, even for a short distance, valves must be closed, the regulator removed, and the valve cap installed (where provided). The exception is for movements on approved dollies.
- Never permit cylinders to contact live electrical equipment or grounding cables.
- Cylinders must be protected from the sun's direct rays.
- Always dispense oxygen through a regulator.
- Never substitute oxygen where air is required.
- Never allow grease or oil to contact cylinders, valves, regulators, or fittings. Never handle these with greasy or oily gloves.
- Mishandled cylinders may rupture violently, release their hazardous contents or become dangerous projectiles. If a neck of a pressurized cylinder should be accidentally broken off, the energy released would be sufficient to propel the cylinder to over three-quarters of a mile high. A standard 250 cubic foot cylinder pressurized to 2,500 PSIG can become a rocket attaining a speed of over 30 miles per hour in a fraction of a second after venting from the broken cylinder connection.
- Label empty cylinders as EMPTY or MT.
- When in doubt, always consider cylinders to be full and handle them accordingly. Many accidents occur when containers under partial pressure are thought to be empty.
- Open cylinder valves slowly.
- Verify that the regulator is working, that all gauges are operating correctly and that all connections are tight to ensure that there are no leaks. When you are ready to use the gas, open the valve with your hands. Never use a wrench or other tool. If you cannot open it with your hands, do not use it.

**Your safety when using compressed gas cylinders depends on you.**

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This information is a service of the OHSU Safety Committee (503 494-7795).  
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