Storing Cylinders

The large amount of potential energy resulting from compression of the gas make the cylinder a potential rocket or fragment bomb; they must be stored carefully.

Always

- Store cylinders in a dry, cool, well-ventilated area away from open flames or heat sources
- Store cylinders upright and secure them with chains or by placing a cylinder cage.
- Segregate full and empty cylinders
- Group cylinders by type of hazard and separate hazards from each other — oxygen cylinders must be separated from flammable cylinders or combustible materials by a minimum of 20 feet
- Store flammable and oxidizers away from emergency exit routes
- Visually inspect stored cylinders on a routine basis for any indication of leakage or problems
- Keep cylinders closed when not in use

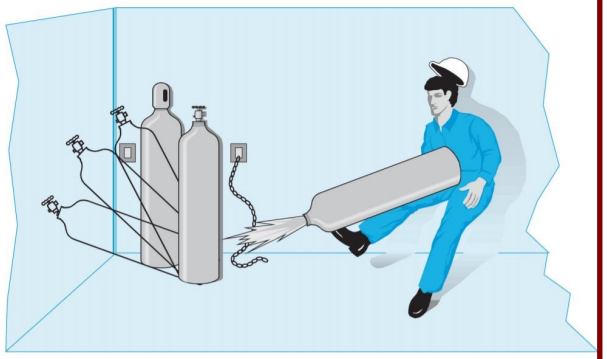
Leaking/Damaged Cylinders

If a cylinder appears to have a structural problem, or if the contents are unknown, it must be removed. Contact Central Stores (x7917) or the supplying vendor as soon as possible.

NEVER attempt to repair a cylinder or valve.

Cylinder Rockets

Don't turn a cylinder into a rocket!



Secure and cap cylinders when not in use.

If a cylinder valve is accidently broken off, a standard 33 cubic foot cylinder at approximately 2,600 psi will become a rocket. The cylinder can attain speeds of up to 40 miles per hour, and as the Myth Busters proved, it can punch a hole through a cinderblock wall. Cylinders must be secured at all times and caps should be on when the cylinder is not in use.

Environmental Health & Safety
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COMPRESSED GAS CYLINDERS

Environmental Health & Safety

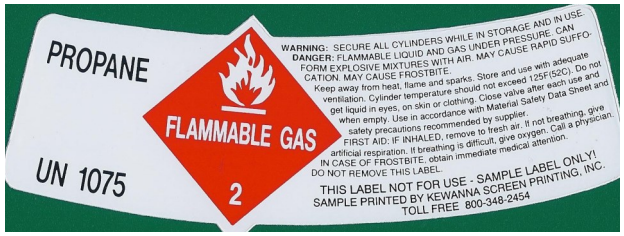
EASTERN WASHINGTON UNIVERSITY

Compressed Gases & Cylinders

Compressed gas cylinders are used in a variety of settings across the university. Gas cylinders are reasonably safe when they are appropriately used, stored, labeled and transported. However, compressed gas cylinders do pose a number of hazards.

Cylinders have the potential to rupture violently if not handled properly, which can result in the cylinder becoming a dangerous projectile. Cylinders can crush feet and containers if they fall over or are dropped.

The gases within the cylinder may be toxic, corrosive, flammable or oxidizing. Even inert gases, if released into a space, can be hazardous as they can quickly displace the oxygen in the area.



Cylinder Labels

Cylinders are required to be labeled according to the Globally Harmonize System, and the label must be visible when the cylinder is stored. The labels must contain the identity of the gas and any hazards.

Labels should not be removed or defaced.

EH&S can make magnetic labels for your gas cylinders to ensure that a label is always visible. Contact us if you would like labels.

Transporting Cylinders

Compressed gas cylinders should only be moved by individuals who are familiar with the hazards and who have been trained.

The cylinders are heavy and can be awkward to move. Improper handling may result in sprains, strains, falls, bruises, or broken bones. Fire, explosion, poisoning, and chemical or cold burns may occur if the gases escape due to mishandling.

Always

- Ensure the cylinder is closed and the cap is in place before moving
- Move cylinders using an appropriate cart or truck
- Secure cylinders before transit
- Transport cylinders in a secure, upright position

Never

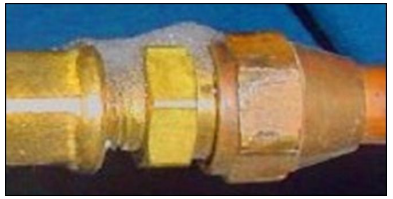
- Drag or slide cylinders
- Drop cylinders or permit them to strike each other violently
- Use cylinders as rollers for moving materials or other equipment
- Move or lift a cylinder by the cap
- Attempt to catch a falling cylinder

Using Cylinders

All users must know the identity of the gas being used and be familiar with any hazards associated with it. Refer to the Safety Data Sheet for each gas.

Always

- Ensure the cylinder is secured
- Visually inspect cylinders and connections prior to each use. Make sure all valves, regulators, hoses, gauges, and couplings are compatible with the cylinder's pressure and contents
- Make sure all connections are tight. Locate leaks by applying soapy water; bubbling areas indicate leaks



- Open cylinder valves slowly and carefully; stand away from the face and back of the gauge
- Close cylinder valves and bleed the lines when the cylinder is not in use
- Release pressure from the regulator before disconnecting

Never

- Attempt to mix gases in a cylinder
- Insert any object into the valve cap openings to remove a stuck cylinder cap
- Permit the cylinder to become part of an electrical circuit