

# TECH SHEET

## Compressed Gas Cylinders

**EMC** Insurance Companies®

*Mishandling compressed gas cylinders can create serious consequences for welding operators or other nearby personnel. These cylinders can release their hazardous contents or become dangerous projectiles. If a neck of a pressurized cylinder should be accidentally broken off, the energy released is sufficient to propel the cylinder to over 30 miles per hour in a fraction of a second. The following are safety precautions for the use and storage of compressed gas cylinders.*

### General Safety

Damaged cylinders, cylinders that are leaking, or cylinders with unknown contents should be returned to the manufacturer immediately. Always have the appropriate Material Safety Data Sheet (MSDS) readily available and be familiar with the health, flammability and reactivity hazards for each gas used by your organization.

### Cylinder Labeling

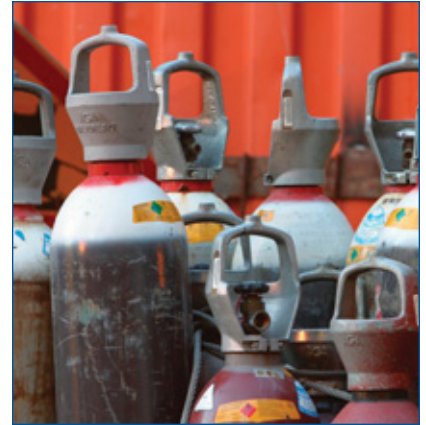
Cylinders must be properly labeled, including the gas identity and appropriate hazards (e.g., health, flammability, reactivity). Color-coding of cylinders cannot be used to indicate the contents because the color codes differ from supplier to supplier. One supplier may color its oxygen cylinders blue while another may color them green. With no set industry color standard, only the gas identity and hazard labels should be used to identify the contents.

### Cylinder Storage

The Department of Environmental Health, Safety and Risk Management at the University of Wisconsin-Milwaukee recommends the following guidelines for cylinder storage:

- Flammables away from oxidizers
- Corrosives away from flammables
- Full cylinders away from empties
- All cylinders away from corrosive vapors

- Store cylinders in an upright position
- Keep valve protection caps in place when the cylinder is not in use
- Mark empty cylinders EMPTY or MT
- Keep valves closed on empty cylinders
- Cylinders must be kept away from sources of heat
- Cylinders must be kept away from electrical wiring where the cylinder could become part of the circuit
- Store cylinders in well-ventilated areas designated and marked only for cylinders
- Keep oxygen cylinders a minimum of twenty feet from flammable gas cylinders or combustible materials. If this cannot be done, separation by a non-combustible barrier at least five feet high having a fire rating of at least one-half hour is required
- Secure empty and full cylinders to a fixed support using chains or other substantial restraining devices



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### Moving Cylinders

- Use a cylinder cart and secure cylinders with a chain.
- Don't use the protective valve caps for moving or lifting cylinders.
- Don't drop a cylinder, permit them to strike each other violently, or handle them roughly.
- Wear appropriate foot protection when moving or transporting cylinders.

Unless cylinders are secured on a special cart, regulators must be removed, valves closed and protective valve caps in place before cylinders are moved. Regulators must also be removed when work is completed and when cylinders are empty.

### Avoid Unsafe Behaviors

- Never roll a cylinder to move it.
- Never carry a cylinder by the valve.
- Never leave an open cylinder unattended.
- Never leave a cylinder unsecured.
- Never force improper attachments onto the wrong cylinder.
- Never grease or oil the regulator, valve, or fittings of an oxygen cylinder.
- Never refill a cylinder.
- Never use a flame to locate gas leaks.
- Never attempt to mix gases in a cylinder.
- Never discard pressurized cylinders in the normal trash.

### For Additional Information

**Compressed Gas Association:** [www.cganet.com](http://www.cganet.com)

**Occupational Safety & Health Administration:**  
[www.osha.gov](http://www.osha.gov)