

# GAS CYLINDERS

Many types of gases can be stored in compressed gas cylinders: atmospheric, fuel, refrigerant, etc. The most common types of cylinders are oxygen, acetylene and argon, which are used during the welding process. Often these gases are pressurized to more than 2,000 pounds per square inch.

This pressurization, along with the gases themselves, can pose hazards that include oxygen displacement, toxic effects, explosions and physical hazards resulting from a ruptured cylinder. Care needs to be exercised when storing and handling these “sleeping giants.”



GAS CYLINDERS





## STORAGE

- Gas cylinders must be stored in a cool, dry and well-ventilated area. Care should be taken not to store the cylinders in areas that are near open flames, sparks, or other heat or ignition sources.
- Cylinders must be stored in areas away from exit routes and where passing vehicles or falling objects may strike them.
- Oxygen cylinders must be stored away from other fuel gas cylinders and combustible materials at a minimum of 20 feet or be separated by a noncombustible barrier at least 5 feet high. Oxygen and fuel gas cylinders stored on a welding cart are considered “connected for use” or “in use” and can be stored together on the cart if they are secured and the valves are protected.
- All compressed gas cylinders must be secured to prevent falling over. When using chains to secure cylinders against a wall, be sure they are kept tight so as not to droop and allow a cylinder to tip.
- When in storage, regulators must be detached from stems and valve protector caps must be attached if appropriate to cylinder design.
- Labels identifying cylinder contents should be intact and legible.
- Cylinders should be labeled “full” or “empty” as appropriate for employees’ awareness. Empty tanks need to be treated as full tanks with regard to storage and handling.

## HANDLING

- Compressed gas cylinders should never be dragged or rolled. When moving, cylinders should be secured to a hand cart designed for that purpose. All cylinder valves should be closed before moving.
- Take care not to drop gas cylinders, allow them to collide together or strike hard surfaces.
- Special care should be given to maintain the integrity of the valve components. If the valve is compromised, pressure can quickly release, turning the cylinder into a dangerous projectile.
- When welding or performing other hot work, the gas cylinders must be located safely away from sparks.

## TRAINING AND SAFETY DATA SHEETS

All employees working with compressed gas should:

- Be trained in the proper storage and handling of the cylinders.
- Have access to and understand the information found on the safety data sheet (SDS) kept on file for each gas. The SDS details the characteristics of the gas, safety hazards, first aid, emergency information and other data pertaining to the product.

**Further safety rules and regulations regarding compressed gases can primarily be found in OSHA Standards 29 CFR1910.101, Compressed Gases; and 29 CFR1910.253, Welding, Cutting and Brazing.**



## GAS CYLINDER CHECK LIST

ITEM	YES	NO	ACTION ITEM
Are cylinders stored away from heat, sparks or other ignition sources in a well-ventilated area?			
Are oxygen cylinders stored away from fuel cylinders and combustible materials? <i>At a minimum of 20 feet apart or separated by a noncombustible barrier at least 5 feet high.</i>			
Are cylinders secured to prevent tip over?			
Are cylinders stored away from exit routes?			
Are cylinders stored away from areas where they could be damaged by falling or passing objects?			
When stored, are regulators detached from cylinder stems and are valve protector caps in place?			
Are all cylinders clearly and legibly labeled?			
Are empty cylinders segregated and labeled as such?			
Are cylinders moved via a hand cart or similar equipment to prevent being dragged or rolled?			
Are safety data sheets readily available for each type of gas used or stored?			
Are employees trained in the proper storage and handling of compressed gas cylinders?			