

COMPRESSED GAS CYLINDER STORAGE AND HANDLING

Due to the nature of compressed gas cylinders, special storage and handling precautions are necessary. The hazards associated with compressed gases include oxygen displacement, explosion hazards, toxic effect of some gases, and the physical hazards of a ruptured cylinder. There are nearly 200 different types of materials in compressed gas cylinders including atmospheric gases, fuel gases, refrigerant gases, and poisonous gases.

The Occupational Safety and Health Administration (OSHA) has regulations governing the use of compressed gases. These regulations further refer to specific Compressed Gas Association materials. The Compressed Gas Association (CGA) is a leader in promoting safe practices when working with compressed gases. CGA has developed many publications designed to ensure the safe handling of compressed gases during manufacture, storage, transportation, distribution and use. Following are some of their recommendations.

Inspection

Gas cylinders should be visually inspected to ensure that they are in safe condition. Leaking regulators, cylinder valves or other damaged equipment should be taken out of service. A cylinder's contents should be identified at all times. Also, a cylinder's status should also be labeled as to whether the cylinder is full, in service or empty.

Storage

Gas cylinders should be properly secured at all times to prevent tipping, falling, or rolling. They can be secured with straps or chains connected to a wall bracket or other fixed surface, or by use of a cylinder stand. Store cylinders in a cool, dry, well-ventilated, fire-resistant area.

Cylinders should be stored where they will not be knocked over or damaged. When a cylinder is not being used, the valve should be closed and the valve protection cap secured in place. The valves of empty cylinders should also be closed.

Handling & Use

Transport gas cylinders so that they do not tip, fall, or roll. Cylinders should be transported in a cylinder truck or cart. Cylinder valves must be closed, regulators must be removed, and valve protection caps must be in place before moving cylinders. Steel-toed safety shoes must be worn when transporting compressed gas cylinders.

Take precautions so that gas cylinders are not dropped or allowed to strike each other or other objects. Damaging the cylinder valve could turn the cylinder into a dangerous missile with the potential to destroy property and injure personnel.

Select the proper regulator for use with each gas cylinder. Do not use lubricants of any type on a gas cylinder regulator. Do not tamper with or attempt to repair a gas cylinder regulator.

Consult the appropriate Material Safety Data Sheet (MSDS) for detailed information on the contents of the gas cylinder. Specific handling and storage precautions will be outlined in the MSDS. The MSDS will also have specifications for appropriate personal protective equipment for worker protection.

Further information is available from the Compressed Gas Association at www.cganet.com and through the Environment, Health & Safety Program at X1451.