

Acetylene and Compressed Gases

Description:

Standards for the storage and handling of compressed gases.

Regulatory Reference

29 CFR §1910.101 Compressed gases (general requirements).
29 CFR §1910.102 Acetylene.
29 CFR §1910.253 Oxygen-fuel gas welding and cutting.

Applies to:

The standard applies to shop and process operations involving compressed gases such as LP-gas or acetylene fuel gas, oxygen, nitrogen, or carbon dioxide. Typically inert gases such as nitrogen or carbon dioxide are used in container purging operations, while fuel gases and oxygen are used for metal cutting and welding.

General Requirements:

Where acetylene and other compressed gases are used in the workplace, the employer must inspect compressed gas cylinders and ensure that compressed gas cylinders under the employer's control are in a safe condition to the extent that this can be determined by visual inspection. Visual and other inspections shall be conducted as prescribed in the Hazardous Materials Regulations of the Department of Transportation (49 CFR parts 171-179). Where those regulations are not applicable, visual and other inspections shall be conducted in accordance with Compressed Gas Association Pamphlets C-6-1968 and C-8-1962.

- Cylinders must be properly marked to indicate their contents and have proper CGA shipping labels attached.
- Empty cylinders should have "Empty" tags attached to distinguish them from cylinders that are available for use.
- Cylinders should be secured in racks or by other means to prevent upset or damage, and oxidizers must be separated from fuels when cylinders are stored and not in use.
- When handled or transported cylinder valve protection must be in place, and they must be secured to prevent damage or excessive movement within vehicles, racks or hand trucks.
- Cylinders must have relief valves installed and maintained in accordance with Compressed Gas Association Pamphlets S-1.1-1963 and 1965 addenda and S-1.2-1963.

The transfer, handling, storage and utilization of acetylene in cylinders shall be in accordance with Compressed Gas Association Pamphlet G-1-1966.

Also see the standards for Oxygen and Welding, Cutting and Brazing.

Training Requirements:

There are no specified training requirements for the compressed gas or acetylene standards. Safety training on the standard for affected employees is appropriate and consideration should be given to incorporating the compressed gas standard into company safety and risk management programs.

Maintenance and Review

There are no prescribed review activities listed in the standards.

Additional Information and Resources

Compressed Gas Association Pamphlets C-6-1968 and C-8-1962

Compressed Gas Association Pamphlets S-1.1-1963 and 1965 addenda and S-1.2-1963

Compressed Gas Association Pamphlet G-1-1966

Working Safely with Compressed Gases, (Video), National Fire Protection Association, Quincy, MA