

Storage Requirement for Compressed Gas Tanks

To maintain compliance with the International Fire Code Chapter 53: Compressed Gases, Environmental Health and Safety has drafted the following requirements for compressed gas storage at all Mississippi State University facilities. These requirements have been approved by the Mississippi State Fire Marshal's Office and reviewed by the Mississippi Institutions for Higher Learning Emergency and Safety Officer. Any questions regarding the use and/or storage of compressed gases should be directed to the MSU Environmental Health and Safety office.

Compressed gas tanks must be strapped to a stationary object at all times when not in transport.

- Compressed gas tanks should be secured to a fixed structure (wall or lab bench/ cabinet) by a chain or strap capable of holding the weight of the tank. The chain or strap must be located approximately $\frac{3}{4}$ the way up the tank and tight enough that rocking of the tank is not possible. Two chains or straps, located at the top and bottom of the tank, may be used as long as they prevent rocking of the tank.
- Only items designed and manufactured to store compressed gas tanks or I-hooks drilled directly into a wall stud or properly anchored can be used. C-clamps attached to bench tops are not appropriate for compressed gas storage.
- A maximum of 3 compressed gases can be chained or strapped together. Tanks must be positioned with at least one side touching a stationary object and the other sides touching another tank or secured by a chain or strap. If multiple tanks are chained or strapped together, the chain or strap must be attached to I-hooks properly secured to the wall or other fixed structure or to a compressed gas wall-mounted bracket.
- If a compressed gas tank storage rack is purchased, the number of tanks held within the rack cannot exceed the manufacturers' storage maximum.
- Items such as rope and bungee cords are not appropriate securing materials.
- These requirements apply to compressed gas storage and filling locations.

The protective cap must be in place when the tank is not in use.

- The protective cap or device must be tightly secured to the tank to protect the valve stem when the tank is not in use or in storage. A tank is considered to be in use if it is connected via an appropriate regulator to a piece of equipment or currently connected for use.

Transportation of compressed gases shall utilize a hand cart/ truck or other mobile device designed for the secure movement of compressed gas tanks or cylinders.

- Carts and trucks approved for moving compressed gas cylinders are designed so that the cylinder/tank are secured against dropping and striking against one another or other surfaces.
- The chains or straps on the hand carts or trucks must be utilized and should be tight against the body of the tank.
- Tanks should not be drug, carried, or transported on devices not designed for such use.

Additional information of proper storage locations and positioning of tanks.

- Compressed gas tanks cannot be stored in egress pathways.
- Compressed gas tanks should be segregated from incompatible materials, extreme temperatures (above 125°F or below subambient), falling objects, sources of ignition, or chemicals which could damage the integrity of the tank.
- Tanks should be stored and used in well ventilated locations.
- If outdoor storage is utilized, tanks must be protected from direct contact with soil or unimproved surfaces. The surface should be graded to prevent the accumulation of water.