

## GAS CYLINDER STORAGE AND HANDLING

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Serious accidents can result from the misuse, abuse, or mishandling of compressed gas cylinders. Safe procedures for their use are as follows:

- **ALL** compressed gas cylinders in service **SHALL** be securely held upright in cylinder racks or secured to other rigid structures so they will not be knocked over.
  - ❖ Secure cylinders using a chain at the top and bottom of the cylinder due to the possibility of earthquakes.
  - ❖ Straps have been known to fail in an earthquake.
- Cylinders should be individually secured with chains.
  - ❖ It is not a good practice to secure a number of cylinders together with a single chain.
- Keep cylinders out of direct sun, away from radiators, and other sources of heat.
- Store cylinders in assigned places away from elevators, stairs, or gangways.
- Storage **SHALL** be located where cylinders will not be knocked over, damaged by passing or falling objects, or subject to tampering by unauthorized persons.
- **DO NOT** store cylinders in unventilated enclosures such as lockers or cupboards.
- Cylinders **SHALL** be legibly marked for the purpose of identifying the gas content with either the chemical or the trade name of the gas.
  - ❖ The label must be on the shoulder of the cylinder (A “full/empty” tag is recommended for each cylinder)
- When cylinders are no longer in use, shut the valves, relieve the pressure in the gas regulators, remove the regulators, and cap the cylinders.
- Segregate empty cylinders from full cylinders, return empty cylinders and unneeded lecture bottles to the supplier rather than leaving them in storage.
- Keep cylinders away from welding or cutting operations so sparks or flame will not reach them.
- Segregate gas cylinder storage from the storage of other chemicals.
- Keep incompatible classes of gases stored separately.
- Keep flammables away from reactives.
- Oxygen cylinders in storage shall be separated from fuel gas cylinders or combustible materials a minimum of 20 feet.
  - ❖ A noncombustible barrier at least 5 feet high having a fire resistance rating of at least one half hour can be used instead of separation.
- When transporting cylinders of compressed gases, the cylinder should always be strapped to a cylinder cart and the valve protected with a cover cap.
- Cylinders may be moved by tilting and rolling them on their bottom edges only if the caps are securely in place.
- Cylinders shall not be dropped or permitted to strike each other.
- **DO NOT** lift the cylinder by the valve protection cap.
- No person, other than the gas supplier, shall attempt to mix gases in a cylinder.

***If you have any questions please contact your supervisor or EH&S at 310-243-3000***