

LOSS CONTROL DATA GUIDE

Pressurized Gas Cylinders

It takes more than common sense when dealing with pressurized cylinders to: (1) protect the cylinder itself, (2) protect the property surrounding the cylinders, and (3) protect the people handling the cylinders. It is important to know the rules for safe use, storage, and movement of pressurized cylinders just as it is important to know why cylinders must be protected.

If a neck of a pressurized cylinder should be accidentally broken off, the energy released would be sufficient to propel the cylinder to over three-quarters of a mile in height. A standard 250 cubic foot cylinder pressurized to 2,500 PSIG (33 lbs.) can become a rocket attaining a speed of 34 miles per hour in one-tenth of a second after venting from the broken cylinder connection.

The following practices should be followed in a safe storage, moving and use to prevent accidents with cylinders.

Storage

1. Secure empty and full cylinders to a wall or vertical support by use of chains, etc., in an upright position.
2. Keep valve protective caps in place when the cylinder is not in use.
3. Mark empty cylinders "EMPTY" or MT".
4. Keep valves closed on empty cylinders.
5. Keep empty and full cylinders segregated.

6. Keep oxygen cylinders a minimum distance of 20 feet from flammable gas cylinders or combustible materials. If this can not be done, separate with a noncombustible barrier at least 5 feet high having a fire-rating of at least one-half hour.
7. Leaking cylinders should be taken outdoors away from sources of ignition. Such cylinders should be plainly tagged, and the supplier should be promptly notified.
8. Cylinders should be kept away from sources of heat.
9. Cylinders should be kept away from electrical wiring where they may become part of the circuit.
10. Storage areas should be well ventilated.
11. Protect cylinders from extremes of weather. Store out of direct sunlight in the summer and protect from accumulations of ice and snow in winter.
12. Storage should not exceed 300 lbs. per storage area. Additional storage should be minimum 300 feet away.

Moving

1. Use a cylinder cart with the chain restraint in place.
2. Don't use slings or electric magnets.
3. Don't use cylinders as rollers for moving material or equipment.

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| <ol style="list-style-type: none"> 4. Don't move or lift cylinders by the protective valve cap. 5. Don't drop a cylinder, or permit them to strike each other violently or handled roughly. 6. Don't use bars to pry cylinders loose when frozen to the ground. The use of warm (not boiling) water is recommended. 7. Employees should be required to utilize proper foot protection when engaged in moving or transporting cylinders. 8. Unless cylinders are secured on a special truck, regulators should be removed, valves closed, and valve protective covers in place before cylinders are moved. <p>Use</p> <ol style="list-style-type: none"> 1. Return leaking cylinders, and cylinders that can not be opened by hand, to authorized personnel. 2. Be sure all connections are tight. Use soapy water (except on oxygen systems) to locate leaks - never use a flame. 3. Keep soap, oil, and grease away from oxygen cylinders. Do not handle cylinders or apparatus with oily hands, gloves, or rags. 4. Use oxygen only for the purpose intended. Never use oxygen as a substitute for compressed air in pneumatic tools or preheat burners. | <ol style="list-style-type: none"> 5. Keep cylinders away from open flame or sources of heat. 6. Safety devices and valves should not be tampered with, nor repairs attempted. 7. Cylinder valves should be closed when moving cylinders, when work is completed, and when cylinders are empty. 8. All cylinders should be used in an upright position. 9. Don't attempt to mix gases in a cylinder. 10. No one, except the owner of the cylinder or persons authorized by the owner, should refill a cylinder. 11. The cylinder valve should always be opened slowly. 12. Fire extinguishing equipment should be readily available when combustible materials can be exposed to welding or cutting operations using compressed cylinder gases. 13. Proper personal protective clothing and equipment should be provided. 14. Employees and others who use pressurized gases should be trained in their use. The provisions of the OSHA Hazard Communication Standard should be consulted, if applicable, to determine training requirements. |
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The loss prevention information and advice presented in this brochure are intended only to advise our insureds and their managers of a variety of methods and strategies based on generally accepted safe practices, for controlling potentially loss producing situations commonly occurring in business premises and/or operations. They are not intended to warrant that all potential hazards or conditions have been evaluated or can be controlled. They are not intended as an offer to write insurance coverage for such conditions or exposures, or to imply that Great American Insurance Company will write such coverage. The liability of Great American Insurance Company is limited to the specific terms, limits and conditions of the insurance policies issued.