

Safetygram

NCI-Frederick

ISM-141

Laboratory Personnel

October 2013

Compressed Gas Cylinder Storage and Handling

Due to the hazards associated with compressed gas cylinders, special storage and handling precautions are necessary. Unsafe use of compressed gases can cause oxygen displacement, explosion hazards, toxic effects, and/or 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) regulates the use and storage of compressed gases. These regulations incorporate safe handling procedures issued by the Compressed Gas Association (CGA). Selected CGA recommendations are listed below:

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 identifiable 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 must 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. Cylinders should be stored in a cool, dry, well-ventilated, fire-resistant area.

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

Handling & Use

Transport gas cylinders so that they do not tip, fall, or roll. Cylinders must 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 will provide foot protection 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 Safety Data Sheet for detailed information on the contents of the gas cylinder. The Safety Data Sheet will include specific handling and storage precautions and specifications for appropriate personal protective equipment.

Further information is available from the Compressed Gas Association at www.cganet.com and through the Environment, Health & Safety Program at (301) 846-1451.