**Compressed Gas Cylinders Safety Policy** 

All compressed gas must be handled in accordance with this policy. Compressed gases present unique hazards. Depending on the particular gas there is a potential for simultaneous exposure to both mechanical and chemical hazards. Gases may be:

· Flammable or combustible

· Explosive

· Corrosive

· Poisonous

· Or a combination of hazards

The pressure in a compressed gas cylinders can cause the cylinder to become a “rocket” if the valve stem is damaged.

**Identification**

The contents of any compressed gas cylinder must be clearly identified. The identification should be stenciled or stamped on the cylinder itself. Compressed gas cylinders that are missing a label and whose contents cannot be identified shall be reported to the Director of Facilities, Equipment and Planning immediately.

Never rely on the color of the cylinder for identification. Cylinder colors vary from supplier to supplier. There is no smoking in areas where flammable compressed gases or canister are stored.

**Types of Compress Gas**

ASC has the following types of compressed gas:

Propane

CO2

Helium

Refrigerant

Acetylene

Nitrogen

Oxygen

Butane Canisters

**Inspection**

Each employee shall perform a visual inspection of the cylinder or canister before use. Work areas shall perform periodic inspections to ensure that compressed gas cylinders under their control are in a safe condition. Report any defects to the Director of Facilities, Equipment and Planning.

**Handling & Use**

The following rules for using and handling compressed gas cylinders shall be followed at all times:

* Gas cylinders must be secured in the top 1/3 of the tank at all times to prevent tipping.
* Cylinders may be attached to bench top, individually to a wall, and or placed in a holding cage.
* Chains or sturdy straps must be used to secure the cylinder.
* If a leaking cylinder is discovered it should be reported to a supervisor or manager immediately. Managers and Supervisor should close the valve and remove the cylinder from the building and away from people. Call the Director of Facilities, Equipment and Planning or the manufacturer.
* Under no circumstances should employees attempt to repair a cylinder or valve.
* Cylinders should be placed with the valve accessible at all times.
* Cylinder valves should be closed whenever not in use or unattended.
* Valve handles should remain on the valve stem at all times when the cylinder is in use.
* Cylinder valves should be opened slowly. Oxygen cylinders should be opened all the way as they have a back-seating valve.
* When opening the valve on a cylinder the user should position the cylinder with the valve pointing away from them and others nearby
* When a cylinder is empty the regulator must be removed and the cylinder must be capped.
* Always use PPE for the task or material you are working with when handling compressed gas cylinders.

**Storage**

The following rules for storing compressed gas cylinders and canisters shall be followed at all times:

* Cylinders and canisters containing flammable gases such as oxygen or acetylene must not be stored in close proximity to open flames, areas where electrical sparks are generated, or where other sources of ignition might be present.
* Compressed gas cylinders must not be stored next to elevators, stairwells, or in aisles/walkways. They may not be stored in a vehicle.
* Oxygen cylinders, full or empty, must not be stored in the same vicinity as flammable gases (including acetylene). The proper storage of oxygen cylinders requires a minimum of 20 feet between flammable gas cylinders or the areas be separated, at a minimum, by a firewall 5 feet high with a fire rating of 0.5 hours.
* Greasy and oily materials must never be stored around oxygen cylinders and fittings must never be greased or oiled.
* Acetylene cylinders should never be stored on their side
* Butane canisters cannot be placed in direct sunlight for any length of time, so the storage area should be dark and away from the sun's rays. The storage area should not be in proximity to an electrical outlet, hot bulb, stove, toaster or other heat source. Butane should not be stored in vehicles.

**Transporting**

The following rules for transporting compressed gas cylinders shall be followed at all times:

* Cylinders should not be subject to rough handling or abuse
* Cylinders should be kept upright
* Cylinder caps must be in place to protect the valve assembly
* Cylinders should not be rolled or dragged
* Cylinders should be properly strapped or chained to designed carts or trucks
* Only one cylinder should be handled at a time
* Cylinders should not be transported in the passenger portion of a vehicle, except for less than 1 mile within the SUNY Cortland grounds with the windows open. An open air pickup truck or box truck should be used to transport for any other distances or locations.

**Training**

All employees whose job responsibility requires them to handle compressed gas cylinders and canisters shall be trained in compressed gas cylinder safety initially upon assignment. The training shall

include:

· Cylinder and Canister Inspection

· Cylinder and Canister Handling and Use

· Cylinder and Canister Storage

· Cylinder Transportation

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