



WHMIS

Quick Facts

Workplace Hazardous Materials Information System



Compressed Gases

Common compressed gases are:
propane, nitrogen, chlorine, helium, and oxygen.

A **compressed gas** is a substance that is a gas at normal room temperature and pressure, and is contained under pressure, usually in a cylinder. Some compressed gases (e.g. acetylene) are stabilized in the cylinder by dissolving the gas in a liquid or solid matrix.



Hazards of Compressed Gases

Sudden, uncontrolled release of cylinder contents – damaged cylinders can rocket or spin out of control causing significant injury and damage. Knocking over an uncapped cylinder breaking the cylinder valve can cause this type of incident.

Suffocation – a compressed gas cylinder contains a huge volume of the chemical. For example, a litre of liquid nitrogen forms 700 litres of nitrogen gas at room temperature. A leak in a confined area could displace air and cause people to suffocate.

Frostbite – gases escaping from a cylinder may be very cold and cause frostbite. Severe frostbite can lead to serious permanent skin damage.

Other hazards – compressed gases may have other hazards such as health, fire or reactivity. Look for other WHMIS hazard symbols on the container

Working Safely with Compressed Gases

UNDERSTAND all of the hazards associated with the material, and how to use it safely.

CONSULT the Material Safety Data Sheet (MSDS) for information about the hazards and necessary precautions for the compressed gas(es) you are using.

INSPECT all cylinders for damage and proper labeling.

SECURE cylinders to a wall or rack in an upright position.

LEAVE the cylinder cap in place until the cylinder is secured and ready for use.

USE the appropriate regulator.

TRANSPORT cylinders using a hand truck or cart designed for the purpose.

PREVENT the release of gas into the workplace.

ENSURE cylinders are not giving off odours or hissing sounds.

USE compressed gases only in well-ventilated areas.

USE the smallest amount of compressed gas necessary.

USE non-sparking ventilation systems and equipment.

REFER to compressed gases only by the name on the supplier label. For example, oxygen is NOT “air”.

KEEP dirt, rust, oil or grease away from all cylinders or fittings.

REPORT leaks to your supervisor immediately and evacuate if appropriate

UNDERSTAND and **PRACTICE** emergency procedures so that you know what to do if it becomes necessary.

DO NOT APPLY any lubricant, jointing compound or tape to cylinder valves, fittings or regulator threads.

DO NOT DROP or **BANG** cylinders against each other.

DO NOT RELY on cylinder colour to identify the gas. Different suppliers may use different colours for cylinders of the same gas.

NEVER USE homemade adaptors or force connections between cylinder valve and gas handling equipment.

NEVER OPEN a damaged valve.

AVOID direct skin contact with extremely cold liquids or compressed gases escaping from the cylinder.

NEVER WEAR watches, rings, or bracelets because they can freeze to exposed skin if splashed by an ultracold gas. Wear insulated gloves to protect against the cold.

***In the event of an emergency...
Warn people in the area and move to a safe
location to call for emergency help.***

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For additional information and resources visit www.whmis.gc.ca and/or www.ccohs.ca