

Special Precautions.

Certain specialty gases require that special precautions be taken by personnel handling these products.



All personnel who may be exposed to these products whether handling or using any Specialty Gas should become familiar with these special precautions:

DO NOT PERMIT UNTRAINED PERSONS TO HANDLE SPECIALTY GASES

All personnel who may be exposed to these products must be properly trained before handling Specialty Gases.

OBTAIN SAFETY INFORMATION BEFORE HANDLING SPECIALTY GASES

Safety information for specific gases can be found in MSDS sheets or other published literature. This material should be obtained and reviewed before using these products. Personnel should become thoroughly familiar with these safety guidelines and copies should be readily available for referral if there are any doubts. If there are any questions, contact your local Air Liquide Representative or contact Customer Services at 1-800-248-1427.

READ THE PRECAUTIONARY LABELS ON CYLINDERS

This important warning applies to all gas cylinders but particularly for specialty gases due to their unique properties. Often special precautionary labels are added in addition to the standard labels found on all gas cylinders and these labels should be thoroughly understood by everyone who comes in contact with these cylinders.

Always consult the MSDS sheets for each gas before using them.

ALWAYS USE RECOMMENDED PROTECTIVE EQUIPMENT WHEN USING SPECIALTY GASES

Appropriate personal protective equipment such as respirators, eye protective equipment, chemical resistant gloves, and clothing should be worn when using certain products. Related safety equipment such as eye wash stations and showers should be nearby and inspected frequently to make certain that they function properly. Ambient air monitors that detect specific gases are important safety devices recommended for many gases, particularly those gases which can be lethal in low dosages.

In many instances Federal, State, or Local fire codes may restrict the storage and handling of certain gases. One recommended method of handling such gases is the use of appropriately designed gas cabinets. These fully enclosed units will hold from one to four cylinders and may have such features as exhaust ventilation, fire suppression systems, and alarms. These cabinets can be configured to be fully automated, or operated manually with little or no potential exposure to personnel.

KNOW WHAT TO DO IN AN EMERGENCY SITUATION

Before working with flammable, oxidizing, or toxic gases read the appropriate safety information contained in the MSDS or other literature. Develop a plan as to appropriate actions to take in the event of a leak or fire and make certain that appropriate emergency equipment is available. If a fire should occur, try to stop the flow from the gas source if possible. Otherwise, if the fire is extinguished, gas may accumulate creating an explosive hazard. Make sure that enclosed spaces where gas can build up are well vented and the gas is dissipated before entering the area.

Cylinder fires can be especially dangerous since often several additional cylinders may be stored in the same area. If a cylinder should start to burn, the resulting heat may cause the safeties on other surrounding cylinders to rupture and fuel the fire. Cool neighboring cylinders with water spray and eliminate other possible sources of ignition.

Leaking cylinders can present their own unique hazards. Small leaks around valve outlets may be stopped easily by tightening the fitting. Make sure workers wear the appropriate protective equipment before trying to stop even the smallest leak of hazardous gases. Never attempt to repair a leak where the valve threads into the cylinder or the safety. For larger leaks or leaks that cannot be stopped, evacuate area personnel who may be exposed first. **Call the Air Liquide Emergency Response number at 1-800-324-7814 and describe the nature of the problem and gases involved.** They will have one of our emergency response coordinators contact you with information on how to safely handle the situation.

Disposal of waste gas can present the same problems as a leaking cylinder. Normally, waste gases can be vented out of the work area and into appropriate disposal systems. Consult with your Air Liquide Representative for information on proper methods of disposal of hazardous gases. Any unused gas that is contained in cylinders should be returned to your supplier for disposal. Also you should remember that if certain gases are mixed, their properties may change to create additional hazards. This can happen if several different gases are vented into one common exhaust system creating unanticipated problems. Separate vent lines may be necessary particularly for reactive gases. Any unused gas that is contained in cylinders should be returned to your supplier for disposal.

Safe handling of all chemicals and gases in a laboratory is important since many chemicals can present serious hazards.



Air Liquide urges our customers to include safety information on compressed and liquefied gases in their safety training programs. Literature and other training aids are available for inclusion in your training programs. On site safety audits by our trained personnel can also be arranged for your convenience.

TRANSPORTATION OF CYLINDERS

Air Liquide America will not load or knowingly sell Specialty Gas cylinders to any customer using an unsuitable delivery vehicle. Specialty Gas cylinders should never be transported in passenger vehicles. While certain flammable gases like acetylene and propane may be transported in open bed pickup trucks, other flammable gases and toxic gases are not allowed in this type of vehicle. In all cases cylinders must be adequately secured so that they do not move about when transported. All vehicles must be properly placarded for the gases they transport.

All customers who transport cylinders must read and sign our "Notice to Customers Who Wish to Transport Cylinders" form.

Customers may be able to safely transport limited quantities of particular gasses, but the preferred method of transporting cylinders of compressed gas is to have Air Liquide deliver and pick up the cylinders by truck or tractor-trailer with a permanently separated cab.

Additional Information

For further technical information about any of these gases or other unlisted gases, refer to the Material Safety Data Sheet (MSDS), the Air Liquide gas encyclopedia titled "Encyclopedie Des Gaz", or the Air Liquide America video "Hazards of Liquefied and Compressed Gases".

Additional product information about these and other gases can be found in publications and videos produced by the Compressed Gas Association (CGA), 4221 Walney Road, 5th Floor, Chantilly, VA 20151-2923, Telephone (703) 788-2700.