

6. Health Hazard Data

Route(s) of Entry:	Eye Contact Yes	Skin Contact Yes	Skin Absorption No
	Inhalation Yes	Ingestion Yes	

Health Hazards:

Acute Breathing high concentrations (greater than 75%) causes symptoms of hyperoxia which includes cramps, nausea, dizziness, hypothermia, ambylopia, respiratory difficulties, bradycardia, fainting spells, and convulsions capable of leading to death.

Chronic N/A

Carcinogenicity:

NTP No	IARC Monographs No	OSHA No
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Signs and Symptoms of Exposure and Emergency First Aid Procedures:

Eye Contact Contact with liquid product may cause tissue freezing.

Remove victim from the source of contamination. Open eyelids, allowing liquid to evaporate. Seek medical attention if victim is experiencing pain.

Skin Contact Contact with liquid product may cause tissue freezing.

Remove contaminated clothing and flush affected areas with lukewarm water. Seek medical attention if victim shows signs of blistering or deep tissue freezing.

Inhalation Breathing high concentrations (greater than 75%) causes symptoms of hyperoxia which includes cramps, nausea, dizziness, hypothermia, ambylopia, respiratory difficulties, bradycardia, fainting spells, and convulsions capable of leading to death.

Conscious victims should be assisted to an uncontaminated area and allowed to inhale fresh air. Unconscious victims should be moved to an uncontaminated area and given assisted respiration. Seek medical attention, informing physician that patient is experiencing hyperoxia.

Ingestion Contact with liquid product may cause tissue freezing.

Seek medical attention if victim shows signs of blistering or deep tissue freezing.

Medical Conditions Aggravated by Exposure:

Persons of ill health that may be aggravated by exposure to oxygen should not be allowed to work with or handle this product.

7. Precautions for Safe Handling and Use

Actions if Released or Spilled:

Evacuate all personnel from affected area. Use appropriate personal protective equipment.

Waste Disposal Method:

N/A

Handling and Storage Precautions:

Liquid oxygen is delivered to a customer into stationary vacuum-jacketed vessels at the customer's location or in portable vacuum-jacketed cylinders. Stationary site vessels should be operated in accordance with the manufacturer and supplier instructions. Do not attempt to repair, adjust or modify operation of these vessels. If the vessel malfunctions, contact the closest supplier location immediately. Liquid oxygen cannot be handled in carbon or low alloy steels. 18-8 and 18-10 stainless steels are acceptable as are copper and its alloys, nickel and its alloys, brass, bronze, silicon alloys, Monel, Inconel, and beryllium. Teflon and Kel-F are preferred gasket materials.

7. Precautions for Safe Handling and Use (Continued)**Other Precautions:**

Liquid oxygen cylinders should be used in well-ventilated areas and in accordance with the manufacturer and suppliers instructions. Liquid cylinders must be kept in an upright position. Specialized hand trucks are necessary for their movement. Full and empty cylinders should be stored away from other flammable products.

Post "NO SMOKING OR OPEN FLAMES" signs in the storage and use areas. There should be no sources of ignition in the storage and use area.

Never transport a cryogenic liquid vessel in an enclosed space such as a vehicle truck or van.

Smoking and open flames should not be allowed near liquid oxygen vessels.

For additional recommendations, see CGA Pamphlets G-4, P-12, P-4.

Transportation Information:

Shipping Name	Oxygen, Refrigerated Liquid
Hazard Class	2.2
ID Number	UN 1073
Shipping Label - 1	Nonflammable Gas
- 2	Oxidizer

NOTE: The OXIDIZER label modified to display word OXYGEN instead of OXIDIZER, and the class number 2 instead of 5.1 may be used in place of the NONFLAMMABLE GAS and OXIDIZER labels.

NFPA Rating:

Health: 3 **Flammability:** 0 **Reactivity:** 0

8. Control Measures**Eye Protection:**

Safety goggles or glasses plus face shield.

Protective Gloves:

Loose fitting, insulated gloves.

Respiratory Protection:

N/A

Ventilation:

Local exhaust to prevent oxygen accumulation above 25%.

Other Protective Clothing or Equipment:

Safety shoes, safety shower.

9. Regulatory Information**SARA TITLE III NOTIFICATIONS AND INFORMATION****SARA Title III – Section 313 Supplier Notification:**

This product does not contain toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372.

SARA Title III – Hazard Classes:

Acute Health Hazard

Fire Hazard

Sudden Release of Pressure Hazard

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