



**6. Health Hazard Data**

<b>Route(s) of Entry:</b>	Eye Contact Yes	Skin Contact Yes	Skin Absorption No
	Inhalation Yes	Ingestion No	

**Health Hazards:**

**Acute** Product is a simple asphyxiant. Effects of oxygen deficiency may include any, all or none of the following: rapid breathing, diminished mental alertness, impaired muscle coordination, blurred speech, and fatigue. As asphyxiation progresses; nausea, vomiting, and loss of consciousness may occur, eventually leading to convulsions, coma and death.  
Contact with liquid product may cause tissue freezing.

**Chronic** N/A

<b>Carcinogenicity:</b>	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** Product is a simple asphyxiant. Effects of oxygen deficiency may include any, all or none of the following: rapid breathing, diminished mental alertness, impaired muscle coordination, blurred speech, and fatigue. As asphyxiation progresses; nausea, vomiting, and loss of consciousness may occur, eventually leading to convulsions, coma and death.  
  
Conscious victim should be assisted to an uncontaminated area and allowed to inhale fresh air. Unconscious victim should be moved to an uncontaminated area and given assisted respiration.

**Ingestion** N/A

**Medical Conditions Aggravated by Exposure:**

Persons of ill health that may be aggravated by exposure to nitrogen should not be allowed to work with 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:**

Do not attempt to dispose of waste or unused quantities. Return in properly labeled shipping container, with any valve outlet plugs or caps secured and valve protection cap in place.

**Handling and Storage Precautions:**

Liquid nitrogen is delivered 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 guidelines. Do not attempt to repair, adjust or modify operation of these vessels. If the vessel malfunctions, contact the nearest supplier location immediately. Liquid nitrogen 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. Store cylinders in a cool, dry, well-ventilated area away from heavy and emergency exits. Do not allow temperature of cylinder storage area to exceed 125° F. Cylinders should be stored in an upright position and firmly secured to prevent falling or being knocked over. Use a suitable hand truck to move vessels, do not drag, slide or roll cylinders. Always secure liquid cylinders during movement and transport in an upright position

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

Liquid nitrogen is noncorrosive and may be used with common structural materials. Liquid nitrogen 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. Always secure cylinders in an upright position during transportation. Never transport a cryogenic liquid vessel in an enclosed space such as a vehicle truck or van. For additional recommendations, see CGA Pamphlets P-9, P-9.1, P-12, P-14 and SB-2.

**Transportation Information:**

<b>Shipping Name</b>	Nitrogen, refrigerated liquid
<b>Hazard Class</b>	2.2
<b>ID Number</b>	UN1977
<b>Shipping Label - 1</b>	Nonflammable Gas

**NFPA Rating:**

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

**8. Control Measures****Eye Protection:**

Safety glasses or goggles with faceshield.

**Protective Gloves:**

Loose fitting, insulated gloves.

**Respiratory Protection:**

Positive pressure airline with full mask or self-contained breathing apparatus should be available for emergency use.

**Ventilation:**

Local exhaust to prevent nitrogen accumulation sufficient to reduce oxygen concentration below 19.5%

**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  
Sudden Release of Pressure Hazard

**Disclaimer of Expressed and Implied Warranties**

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