



Date Prepared: July 1, 1992

Date Reviewed: March 21, 2006

## MATERIAL SAFETY DATA SHEET

Product Name: Helium

March 21, 2006

### 1. Chemical Product and Company Identification

Linweld, Inc  
9911 Deer Park Road  
Waverly, NE 68462

Telephone Number  
Information: (402) 786-3330  
Emergency: (402) 786-5277

Product Name: Helium  
Chemical Name: Helium  
Common Names: Helium; Helium, compressed

### 2. Hazard Ingredients and Identity Information

COMPONENT	% VOLUME	OSHA-PEL	ACGIH-TLV	CAS NUMBER
Helium	> 99.5	Simple Asphyxiant	Simple Asphyxiant	007440-59-7

### 3. Physical and Chemical Characteristics

Boiling Point:	-452.1° F	Vapor Density:	0.14	pH:	N/A
Melting Point:	None	Evaporation Rate:	N/A	Physical State:	Gas
Vapor Pressure:	N/A	Solubility (H2O):	Negligible		

Appearance and Odor:  
Colorless, odorless gas.

How to Detect This Substance:  
N/A

Other Physical and Chemical Data:  
Liquid density at boiling point, 7.8 lb/ft<sup>3</sup> (125 kg/m<sup>3</sup>)  
Gas density at 70° F 1 atm, 0.0103 lb/ft<sup>3</sup> (0.165 kg/m<sup>3</sup>)

### 4. Fire and Explosion Hazard Data

Flammability Classification:	Nonflammable	Flash Point (F):	N/A	LEL (%):	N/A
Ignition Temperature:	N/A	Method:	N/A	UEL (%):	N/A

Extinguishing Media:  
N/A

Fire Fighting Procedures:  
N/A

Fire & Explosion Hazard:  
N/A

### 5. Reactivity Data

Stability:	Stable	Hazardous Polymerization:	Will not occur
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Incompatibility:  
None

Conditions to Avoid:  
N/A

Hazardous Decomposition or Byproducts:  
None

Other Reactivity Data:  
N/A

**6. Health Hazard Data**

Route(s) of Entry:	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.

**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** No adverse effects anticipated.

If pain is present, seek attention of an ophthalmologist for further treatment.

**Skin Contact** No adverse effects anticipated.

**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** No adverse effects anticipated.

**Medical Conditions Aggravated by Exposure:**

Persons of ill health that may be aggravated by exposure to helium 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 caps in place.

**Handling and Storage Precautions:**

Use only in well-ventilated areas. Valve protection caps must remain in place unless cylinder is secured with valve outlet piped to point of use. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure-reducing regulator when connecting cylinder to lower pressure piping or systems. Do not heat cylinder. Use a check valve or trap in the discharge line to prevent hazardous backflow into the cylinder.

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavy traffic areas and emergency exits. Do not allow temperature of cylinder storage area to exceed 125° F. Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated.

**Other Precautions:**

Helium is noncorrosive and may be used with common structural materials.

Compressed gas cylinders should only be refilled by qualified personnel. Shipment of compressed gas cylinders that have been filled without the consent of the cylinder owner is a violation of federal law (49 CFR).

Always secure cylinders in an upright position during transportation. Never transport cylinders in enclosed space such as a vehicle truck or van.

For additional recommendations, see CGA Pamphlets P-1, P-14, P-9 and SB-2.

**Product Name: Helium**

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

### **Transportation Information:**

<b>Shipping Name</b>	Helium, compressed
<b>Hazard Class</b>	2.2
<b>ID Number</b>	UN1046
<b>Shipping Label - 1</b>	Nonflammable Gas

### **NFPA Rating:**

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

## **8. Control Measures**

### **Eye Protection:**

Safety glasses or goggles as appropriate

### **Protective Gloves:**

Protective gloves of any material.

### **Respiratory Protection:**

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

### **Ventilation:**

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

### **Other Protective Clothing or Equipment:**

Safety shoes as appropriate.

## **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:**

Sudden Release of Pressure Hazard

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