

**HELIUM****Product Name:** Helium, Compressed**Chemical Name:** Helium**Formula:** He

0

**Chemical Family:** Inert Gas

0 0

**Use:** Various

SA

**Synonyms:** Helium USP**NFPA Fire:** 0**HMIS Fire:** 0**Acute:** No**NFPA Health:** 0**HMIS Health:** 0**Chronic:** No**NFPA Reactivity:** 0**HMIS Reactivity:** 0**Fire:** No**NFPA Special Hazard:** SA**Mixture:** No**Reactive:** No**Sudden Release Pressure:** Yes**02. INGREDIENTS - COMPOSITION & INFORMATION**

COMPONENT	CAS No.	PERCENT		EXPOSURE GUIDELINES	
		(BY WT.)		OSHA - TWA	ACGIH - STEL
Helium	7440-59-7	99.0%	100.0%	None.	Simple Asphyxiant.

LD50: None. LC50: None.

**03. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW:****Danger:** High Pressure Gas

Do not breath gas

Can cause rapid suffocation

Self contained breathing apparatus may be required by rescue workers

**Potential Health Effects Information:**

**Inhalation:** Simple asphyxiant. Helium is nontoxic, but may cause suffocation by displacing the oxygen in air. Exposure to oxygen-deficient atmosphere (<19.5%) may cause dizziness, drowsiness, nausea, vomiting, excess salivation, diminished mental alertness, loss of consciousness and death. Exposure to atmospheres containing 8-10% or less oxygen will bring about unconsciousness without warning and so quickly that the individuals cannot help or protect themselves. Lack of sufficient oxygen may cause serious injury or death.

**Warning:** The practice of intentionally inhaling helium for a voice altering effect is extremely dangerous and may result in serious injury or death.

**Eye:** None.**Skin:** None.**Ingestion:** None.**Chronic Effects:** None established.**Medical Conditions Aggravated By** None.**Overexposure:****Carcinogenicity:** Not listed in NTP, OSHA or IARC**04. FIRST AID MEASURES**

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

**Eye:** None.

## FIRST AID CONTINUED:

Skin: None.

Ingestion: None.

Notes To Physician: None.

**05. FIRE FIGHTING MEASURES**

Flash Point: Not applicable; Gas.

Autoignition: None

Flammable Limits - Lower: Not applicable.

Flammable Limits - Upper: Not applicable

Extinguishing Media: Nonflammable, does not support combustion. Use extinguishing media appropriate for the surrounding fire.

Fire Fighting Instructions: Simple asphyxiant. If possible, without risk, remove cylinders from fire area or cool with water. Self-contained breathing apparatus may be required for rescue workers.

Containers can build up pressure if exposed to heat (fire).

Fire And Explosion Hazards: Upon exposure to intense heat or flame cylinder may vent rapidly and/or rupture violently. Most cylinders are designed to vent contents when exposed to elevated temperatures. Pressure in a container can build up due to heat and it may rupture if pressure relief devices should fail to function.

Hazardous Combustion Products: None known.

Sensitivity To Static Discharge: None.

Sensitivity To Mechanical Impact: None.

**06. ACCIDENTAL RELEASE MEASURES**

Evacuate: Evacuate all personnel from the affected area. Shut off source of helium, if without risk. Ventilate enclosed areas or remove cylinders to an outdoor location. If leaking from cylinder or its valve, contact your supplier.

**07. HANDLING AND STORAGE**

Storage: Store and use with adequate ventilation. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling or being knocked over. Protect cylinders from physical damage; do not drag, roll, slide or drop. Do not allow storage area temperature to exceed 125°F (52°C). Full and empty cylinders should be segregated. Use a first-in, first-out inventory system to prevent full containers from being stored for long periods of time.

Handling: Use a suitable hand truck for cylinder movement. Never attempt to lift a cylinder by its valve protection cap. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier. Never insert and object (e.g., wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing leak to occur. Use an adjustable strap wrench to remove over tight or rusted caps. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit. For additional precautions in using helium see Section 16 - Other Information

**08. EXPOSURE CONTROLS - PERSONAL PROTECTION**

Engineering Controls:

Ventilation: Natural or mechanical to prevent oxygen-deficient atmospheres under 19.5% oxygen.

Personal Protective Equipment  
(PPE):

Skin Protection: None required.

Glasses: Safety glasses are recommended when handling cylinders.

- Shoes: Safety shoes are recommended when handling cylinders.
- Gloves: Work gloves are recommended when handling cylinders.
- Respirator: Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmosphere. Air purifying respirators will not provide protection.

### 09. PHYSICAL AND CHEMICAL PROPERTIES

- Physical State: Gas
- Color: Colorless gas.
- Odor: Odorless
- Molecular Weight: 4.00
- Boiling Point: -452.1°F ( -268.9°C)
- Specific Gravity: .135 At 70°F (21.1°C) @ 1 atm, Air = 1
- Freezing/Melting Point:
- Vapor Pressure: Not applicable.
- Gas Density: .0103 lb./ft<sup>3</sup> (0.165 kg/CuM), At 70°F (31.1°C) @ 1 atm
- Evaporation Rate: Not Applicable - Gas
- Water Solubility: 0.0094 Vol./Vol. At 32° F (0°C)
- Expansion Ratio: Not Applicable - Gas
- pH: Not Applicable - Gas
- Odor Threshold: Odorless
- Coefficient Of Water/Oil Distribution: Information not available

### 10. STABILITY AND REACTIVITY

- Incapability With Other Materials: None
- Conditions To Avoid: None.
- Chemical Stability: Stable
- Hazardous Decomposition Products: none
- Hazardous Polymerization: Will not occur

### 11. TOXICOLOGICAL INFORMATION

- Irritancy Of Material: None.
- Reproductive Effects: None.
- Teratogenicity: None.
- Synergistic Materials: None.
- Sensitization To Material: None.
- Mutagenicity: None.

### 12. ECOLOGICAL INFORMATION

- Ecotoxicity: No adverse ecological effects are expected. Helium does not contain any Class I or Class II Ozone depleting chemicals (40 CFR Part 82). Helium is not listed as a marine pollutant by DOT (49 CFR Part 171).

### 13. DISPOSAL CONSIDERATIONS

- Waste Disposal Method: Do not attempt to dispose of residual or unused quantities. Return cylinder to supplier.
- Unserviceable cylinders should be returned to the supplier for safe and proper disposal.
- For emergency disposal, secure the cylinder and slowly discharge gas to the atmosphere in a well ventilated area or outdoors.

### 14. TRANSPORT INFORMATION

- DOT/IMO Shipping Name: Helium, compressed.

Hazard Class: 2.2 (Nonflammable Gas)  
Identification Number: UN 1046  
PIN: 1046  
Product RQ: None.  
Shipping Label: Nonflammable Gas  
Placard (When Required): Nonflammable Gas.  
Special Shipping Information: Cylinders should be transported in a secure upright position, in a well ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious hazards and should be discouraged.

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WOULD YOU LIKE MORE INFORMATION OR LEAVE A MESSAGE

[YES](#)

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