

# Safety Data Sheet

## Helium, refrigerated liquid

**United States Cylinder Gas**

11618 S Mayfield Ave, Alsip, Illinois, 60803

Emergency Phone: CHEMTREC 1-800-424-9300

www.uscylgas.com

### Section 1: Product and Company Identification

**United States Cylinder Gas**

11618 S Mayfield Ave, Alsip, Illinois, 60803

(708) 389-1402

Emergency Phone: CHEMTREC 1-800-424-9300

www.uscylgas.com

Product Code: **Helium, refrigerated liquid**

Part Number: HEL L

**Synonyms:** Liquid HE, Cryogenic Helium

**Recommended Use:** Industrial use. Medical applications. Use as directed.

**Usage Restrictions:**

### Section 2: Hazards Identification



Hazard Classification:

Gases Under Pressure, H281

Simple Asphyxiant, OSHA-H01

Hazard Statements:

H281: Contains refrigerated gas; may cause cryogenic burns or injury

CGA-HG01: MAY CAUSE FROSTBITE.

OSHA-H01: MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.

Precautionary Statements

P202: Do not handle until all safety precautions have been read and understood.

P262: Do not get in eyes, on skin, or on clothing.

P280: Wear protective gloves, protective clothing, eye protection, and/or face protection.

P282: Wear cold insulating gloves, and either face shield or eye protection.

P403: Store in a well ventilated place.

CGA-PG05: Use a back flow preventive device in the piping.

CGA-PG06: Close valve after each use and when empty.

CGA-PG10+CGA-PG20: Use only with equipment of compatible materials of construction and rated for cylinder pressure.

CGA-PG12: Do not open valve until connected to equipment prepared for use.

CGA-PG23: Always keep container in upright position.

CGA-PG24: DO NOT change or force fit connections.

CGA-PG27: Read and follow the Safety Data Sheet (SDS) before use.

### Section 3: Composition/Information on Ingredients

	CAS #	Concentration
Helium	7440-59-7	100%

	Trade Names
Helium	He, Helium, Atomic helium, Helium-4, p-Helium, O-Helium

### Section 4: First Aid Measures

IF ON SKIN: Get immediate medical advice/attention. Thaw frosted parts with lukewarm water. Do not rub affected area.

### Section 5: Fire Fighting Measures

**Suitable Extinguishing Media:**

Use suitable extinguishing material for surrounding fire.

**Protection of Firefighters:**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

	Products of Combustion
Helium	Miscellaneous decomposition products

### Section 6: Accidental Release Measures

**Personal Precautions:**

Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.

**Environmental Precautions:**

Keep away from drains, surface and ground water. Avoid heat, flames, sparks and other sources of ignition.

**Methods for Containment and Cleanup:**

Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition. If necessary, cover drains. Absorb large spills, dispose in appropriate containers.

### Section 7: Handling and Storage

**Handling:**

See precautions in Section 2. Only trained personnel should handle this product. Always use approved personal protective equipment.

**Storage:**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store and handle in accordance with all current regulations and standards. Store in a well-ventilated area. Keep separated from incompatible substances.

	Incompatibilities	Conditions to avoid
Helium	No data available.	Protect from physical damage and heat. Containers may rupture or explode if exposed to heat. Keep liquid helium from contact with air.

## Section 8: Exposure Controls/Personal Protection

Exposure Guidelines	Threshold Limit Value -TLV (ppm)
Helium	Not Available

### Engineering Controls

No specific controls are needed.

### Eye Protection

Wear splash resistant safety goggles.

### Skin Protection

Wear chemical protective clothing, including gloves.

### Respiratory Protection

Use self-contained breathing apparatus.

### General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

## Section 9: Physical and Chemical Properties

	Physical State / Physical Form	Appearance / Color	Odor	Flash Point	Flammability	Partition Coefficient
Helium	Gas	Colorless	Odorless	Not flammable	False	0

	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits	Boiling Point	Freezing Point	Vapor Pressure
Helium	Nonflammable	Not Available	Not Available	-452 F (-269 C)	-458 F (-272 C) @ 26 atm	Not Available

	Vapor Density	Specific Gravity	Water Solubility	pH	Evaporation Rate	Viscosity
Helium	0.138	Not applicable	0.94% @ 0 C	0	Not applicable	0.02012 cP @ 26.8 C

	Molecular Weight	Molecular Formula	Density	Volatility	Solvent Solubility
Helium	4.002602	He	Not Available	Not applicable	Insoluble : Not available

## Section 10: Stability and Reactivity

	Stability	Conditions to Avoid	Incompatible Materials
Helium	Stable at normal temperatures and pressure.	Protect from physical damage and heat. Containers may rupture or explode if exposed to heat. Keep liquid helium from contact with air.	No data available.

	Hazardous Decomposition Products	Possibility of Hazardous Reactions
Helium	Miscellaneous decomposition products	Will not polymerize.

## Section 11: Toxicology Information

The toxicology information is calculated for the mixture.

### Acute Toxicity Estimates (ATE) of the mixture.

Oral ATE (mg/kg)	Not Available
Inhalation ATE (ppm)	Not Available
Dermal ATE (mg/kg)	Not Available

## Additional health hazards:

OSHA-H01: MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.

Skin Corrosion/Irritation	Not Available
Eye Damage/Irritation	Not Available
Respiratory or Skin Sensitization	Not Available
Germ Cell Mutagenicity	Not Available
Carcinogenicity	Not Available
Reproductive Toxicity	Not Available
STOT – single exposure	Not Available
STOT – repeated exposure	Not Available
Aspiration Hazard	Not Available

## Section 12: Ecological Information

### Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Helium	Fish toxicity: 0 Invertebrate toxicity: Algal toxicity: Phyto toxicity: Other toxicity:	Not available	Not available	Not available

## Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations. Do not dispose in sewers or waterways. Recycle if possible to do so. Return to manufacturer for disposal if needed.

## Section 14: Transportation Information

### U.S. DOT 49 CFR 172.101

	Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Helium	Helium, Compressed	UN1046	2.2	Not available	Not available	Not available	Not available

### Canadian Transportation of Dangerous Goods

	Shipping Name	UN Number	Class	Packing Group / Risk Group
Helium	Helium, Compressed	UN1046	2.2	Not Available

## Section 15: Regulatory Information

### U.S. Regulations

	CERCLA Sections	SARA 355.30	SARA 355.40
Helium	Not Regulated.	Not Regulated.	Not Regulated.

### SARA 370.21

	Acute	Chronic	Fire	Reactive	Sudden Release
Helium	Yes	No	No	No	Yes

#### SARA 372.65

Helium	Not Regulated.
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#### OSHA Process Safety

Helium	Not regulated.
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#### State Regulations

	CA Proposition 65
Helium	Not regulated.

#### Canadian Regulations

	WHMIS Classification
Helium	A

#### National Inventory Status

	US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Helium	Helium	Not listed.	Listed on DSL.

### Section 16: Other Information

	NFPA Rating
Helium	Health = 1 Fire = 0 Reactivity = 0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard