

# Safety Data Sheet

## Helium, compressed

### 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

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### Product Code: Helium

Part Number: HEL219, HEL262, HELUHPT, HEL110, HEL40,

**Synonyms:** HE, HEL, Ballon Grade Helium.

**Recommended Use:** Industrial use. Medical applications. Diving Gas (Underwater Breathing). Use as directed.

**Usage Restrictions:**

## Section 2: Hazards Identification



### Hazard Classification:

Gases Under Pressure, H280

Simple Asphyxiant, OSHA-H01

### Hazard Statements:

H280: Contains gas under pressure; may explode if heated

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

### Precautionary Statements

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

P271+P403: Use and store only outdoors or in a well-ventilated place.

CGA-PG02: Protect from sunlight when ambient temperature exceeds 52C (125F).

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-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: wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

## 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<br>Invertebrate toxicity: Algal toxicity: Phyto toxicity:<br>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. |
|--------|----------------|

### OSHA Process Safety

|        |                |
|--------|----------------|
| Helium | Not regulated. |
|--------|----------------|

### State Regulations

|        |                          |
|--------|--------------------------|
|        | <b>CA Proposition 65</b> |
| Helium | Not regulated.           |

### Canadian Regulations

|        |                             |
|--------|-----------------------------|
|        | <b>WHMIS Classification</b> |
| Helium | A                           |

### National Inventory Status

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

## Section 16: Other Information

|        |                                    |
|--------|------------------------------------|
|        | <b>NFPA Rating</b>                 |
| Helium | Health = 1 Fire = 0 Reactivity = 0 |

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