



# Safety Data Sheet

## Helium

WeldWorld-Canada  
7506 42st  
Leduc, AB  
Canada T9E 0R8

Emergency Phone: CANUTEC 1-613-996-6666.

### Section 1: Product and Company Identification

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Product Code: Helium

### Section 2: Hazards Identification



**Warning**

#### Hazard Classification:

Gases Under Pressure

#### Hazard Statements:

Contains gas under pressure; may explode if heated

#### Precautionary Statements

#### Storage:

Protect from sunlight.  
Store in well-ventilated place.

### Section 3: Composition/Information on Ingredients

CAS #

| Chemical Substance | Chemical Family | Trade Names   |
|--------------------|-----------------|---|
| HELIUM             | Inorganic gases | HELIUM GAS; HELIUM COMPRESSED; HELIUM-4; ATOMIC HELIUM; UN 1046; He |

## Section 4: First Aid Measures

| Skin Contact                           | Eye Contact                      | Ingestion  | Inhalation   | Note to Physicians               |
|--|----------------------------------|--|--|----------------------------------|
| Wash exposed skin with soap and water. | Flush eyes with plenty of water. | If a large amount is swallowed, get medical attention. | If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention. | For inhalation, consider oxygen. |

## Section 5: Fire Fighting Measures

| Suitable Extinguishing Media  | Products of Combustion | Protection of Firefighters   |
|---|------------------------|--|
| Non-flammable. Use suitable extinguishing media for surrounding fire. | Non-flammable          | <ul style="list-style-type: none"> <li>▪ Non-flammable</li> <li>▪ Non-flammable</li> </ul> |

## Section 6: Accidental Release Measures

| Personal Precautions   | Environmental Precautions                | Methods for Containment                      |
|--|--|--|
| Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. | Avoid soil, waterways, drains and sewers | Stop leak if possible without personal risk. |

| Methods for Cleanup                                    | Other Information |
|--|-------------------|
| Stop leak, evacuate area. Contact emergency personnel. | None              |

## Section 7: Handling and Storage

| Handling  | Storage                                      |
|---|--|
| Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. | Keep separated from incompatible substances. |

## Section 8: Exposure Controls/Personal Protection

| Exposure Guidelines               |
|-----------------------------------|
| HELIUM: ACGIH (simple asphyxiant) |

### Engineering Controls

Handle only in fully enclosed systems.

| Eye Protection                                | Skin Protection                      | Respiratory Protection |
|---|--------------------------------------|------------------------|
| Eye protection not required, but recommended. | Protective clothing is not required. | Non-flammable          |

### 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 | Appearance | Color     | Change in Appearance | Physical Form | Odor     | Taste     |
|----------------|------------|-----------|----------------------|---------------|----------|-----------|
| Gas            | Colorless  | Colorless | N/A                  | Gas           | Odorless | Tasteless |

| Flash Point   | Flammability  | Partition Coefficient | Autoignition Temperature | Upper Explosive Limits | Lower Explosive Limits |
|---------------|---------------|-----------------------|--------------------------|------------------------|------------------------|
| Not flammable | Not available | Not available         | Nonflammable             | Nonflammable           | Nonflammable           |

| Boiling Point   | Freezing Point           | Vapor Pressure     | Vapor Density | Specific Gravity | Water Solubility | pH             | Odor Threshold | Evaporation Rate | Viscosity           |
|-----------------|--------------------------|--------------------|---------------|------------------|------------------|----------------|----------------|------------------|---------------------|
| -452 F (-269 C) | -458 F (-272 C) @ 26 atm | 1719 mmHg @ -268 C | 0.138 (Air=1) | Not applicable   | 0.94% @ 0 C      | Not applicable | Not available  | Not applicable   | 0.02012 cP @ 26.8 C |

| Molecular Weight | Molecular Formula | Density          | Weight per Gallon | Volatility by Volume | Volatility     | Solvent Solubility       |
|------------------|-------------------|------------------|-------------------|----------------------|----------------|--------------------------|
| 4.0026           | He                | 0.1785 g/L @ 0 C | Not available     | 100%                 | Not applicable | Insoluble: Not available |

## Section 10: Stability and Reactivity

| Stability                                   | Conditions to Avoid                         | Incompatible Materials |
|---|---|------------------------|
| Stable at normal temperatures and pressure. | Stable at normal temperatures and pressure. | No data available.     |

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

## Section 11: Toxicology Information

### Acute Effects

| Oral LD50     | Dermal LD50   | Inhalation   |
|---------------|---------------|--|
| Not available | Not available | Nausea, vomiting, difficulty breathing, irregular heartbeat, headache, fatigue, dizziness, disorientation, emotional disturbances, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma |

| Eye Irritation                    | Skin Irritation   | Sensitization        |
|-----------------------------------|-------------------|----------------------|
| Liquid: frostbite, blurred vision | Liquid: frostbite | Difficulty breathing |

### Chronic Effects

| Carcinogenicity | Mutagenicity  | Reproductive Effects | Developmental Effects |
|-----------------|---------------|----------------------|-----------------------|
| Not available   | Not available | Not available        | No data               |

## Section 12: Ecological Information

### Fate and Transport

| Eco toxicity  | Persistence / Degradability | Bioaccumulation / Accumulation | Mobility in Environment |
|---|-----------------------------|--------------------------------|-------------------------|
| Fish toxicity: Not available<br>Invertebrate toxicity: Not available<br>Algal toxicity: Not available<br>Phyto toxicity: Not available<br>Other toxicity: Not available | Not available               | Not available                  | Not available           |

## Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations.

## Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

| Proper Shipping Name | ID Number | Hazard Class or Division | Packing Group  | Labeling Requirements | Passenger Aircraft or Railcar Quantity Limitations | Cargo Aircraft Only Quantity Limitations | Additional Shipping Description |
|----------------------|-----------|--------------------------|----------------|-----------------------|--|--|---------------------------------|
| Helium, compressed   | UN1046    | 2.2                      | Not applicable | 2.2                   | 75 kg or L   | 150 kg                                   | N/A                             |

### Canadian Transportation of Dangerous Goods

| Shipping Name      | UN Number | Class | Packing Group / Risk Group |
|--------------------|-----------|-------|----------------------------|
| Helium, compressed | UN1046    | 2.2   | Not applicable             |

## Section 15: Regulatory Information

### U.S. Regulations

| CERCLA Sections | SARA 355.30    | SARA 355.40    |
|-----------------|----------------|----------------|
| Not regulated.  | Not regulated. | Not regulated. |

### SARA 370.21

| Acute | Chronic | Fire | Reactive | Sudden Release |
|-------|---------|------|----------|----------------|
| Yes   | No      | No   | No       | Yes            |

### SARA 372.65

Not regulated.

### OSHA Process Safety

Not regulated.

### State Regulations

| CA Proposition 65 |
|-------------------|
| Not regulated.    |

### Canadian Regulations

| WHMIS Classification |
|----------------------|
| A                    |

### National Inventory Status

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

## Section 16: Other Information

| NFPA Rating                             |
|---|
| HEALTH=0 FIRE=0 REACTIVITY=0 SPECIAL=SA |

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