



# Material Safety Data Sheet

## 1. Product and Company Identification

Product name : **Helium, compressed**  
Chemical formula : He  
Synonyms : Helium gas; Helium compressed; Helium-4; Atomic Helium; He  
Company : SpecAir Specialty Gases  
22 Albiston Way  
Auburn, Maine 04210 USA  
Telephone : 207-777-6218  
Emergency : 800-535-5053

## 2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Helium, compressed	7440-59-7	100%

## 3. Hazards Identification

### Emergency Overview

May cause difficulty in breathing.  
Containers may rupture or explode if exposed to heat.

### Potential Health Effects

Inhalation : Nausea, vomiting, difficulty breathing, irregular heartbeat, headache, fatigue, dizziness, disorientation, emotional disturbances, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma.  
Eye contact : Frostbite, blurred vision.  
Skin contact : Frostbite.  
Ingestion : Ingestion of harmful amounts is unlikely.  
Chronic Health Hazard : None.

## 4. First Aid Measures

General advice : None.  
Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.  
Skin contact : Wash exposed skin with soap and water.  
Ingestion : If a large amount is swallowed, get medical attention.  
Inhalation : 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.

## 5. Fire-Fighting Measures

- Suitable extinguishing media : Carbon dioxide, regular dry chemical.  
Large fires: Use regular foam or flood with fine water spray.
- Specific hazards : Negligible fire hazard. Containers may rupture or explode if exposed to heat.
- Fire fighting : Move container from fire area if it can be done without risk. Cool containers with water spray until well after fire is out. Stay away from the ends of tanks. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tanks, rail car or tank truck, evacuation radius: 800 meters (1/2 mile).

## 6. Accidental Release Measures

- Personal precautions : None.
- Environmental precautions : None.
- Methods for cleaning up : Stop leak if possible without personal risk. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.
- Additional advice : None.

## 7. Handling and Storage

### Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

### Storage

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

## 8. Exposure Controls / Personal Protection

### Exposure limits

ACGIH (simple asphyxiant)

### Engineering measures

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

### Personal protective equipment

- Respiratory protection : Under conditions or frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.  
For unknown concentrations or immediately dangerous to life or health – Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive pressure mode in combination with a separate escape supply.  
Any self-contained breathing apparatus with a full facepiece.
- Hand protection : Protective gloves are not required.
- Eye protection : Eye protection not required, but recommended.
- Skin and body protection : Protective clothing is not required.

## 9. Physical and Chemical Properties

- Form : Gas.
- Color : Colorless.
- Odor : Odorless.
- Molecular weight : 4.0026

Vapor pressure : 1719 mmHg @ -268 C  
Vapor density : 0.138 (air = 1)  
Specific gravity : Not applicable.  
Boiling point : -452 F (-269 C) @ 1 atm  
Freezing point : -458 F (-272 C) @ 26 atm  
Water solubility : 0.94% @ 0 C  
Evaporation rate : Not applicable.

## 10. Stability and Reactivity

Stability : Stable at normal temperature and pressure.  
Conditions to avoid : Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.  
Materials to avoid : No data available.  
Hazardous decomposition products : Thermal decomposition products: miscellaneous decomposition products.

## 11. Toxicological Information

### Acute Health Hazard

Ingestion : Not available.  
Inhalation : Highly toxic.  
Skin : Not available.

## 12. Ecological Information

Not available.

## 13. Disposal Considerations

Waste from residues / unused products : Dispose in accordance with all applicable regulations.  
Contaminated packaging : Return cylinder to supplier.

## 14. Transport Information

### DOT (US only)

Proper shipping name : Helium, compressed  
Class : 2.2  
UN/ID No. : UN1046  
Labeling : Non-flammable Gas

### Further information

Cylinders should be transported in a secure upright position in a well ventilated truck.

## 15. Regulatory Information

OSHA Process Safety (29 CFR 1910.119) Hazard Class(es)  
Not regulated.

TCSA

Material is listed in TSCA inventory.

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355.30)

Not regulated.

SARA Title III Section 304 Extremely Hazardous Substances (40 CFR 355.40)

Not regulated.

SARA Title III SARA Sections 311/312 Hazardous Categories (40 CFR 370.21)

Acute: Yes

Chronic: No

Fire: No

Reactive: No

Sudden Release: Yes

SARA Title III Section 313 (40 CFR 372.65)

Not regulated.