



**Material Safety Data Sheet**  
**Helium, Compressed**

**AXCEL GASES**

Creation Date: 28.02.2008

MSDS No. : AX-15  
Page 1 / 6

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY**

**Product name:** Helium Compressed  
**Chemical formula:** He  
**Known uses:** Not known  
**Company:** Axcel Gases  
**Head Office:**  
1K/49, NIT, Faridabad, 121001, India  
**Email:** [info@axcelgases.com](mailto:info@axcelgases.com)  
**Works:**  
80 KM Delhi-Jaipur Highway, Distt. Rewari, 123106  
Haryana, India  
**Email:** [info@axcelgases.com](mailto:info@axcelgases.com)

**2. HAZARDS IDENTIFICATION**

WARNING!

**EMERGENCY OVERVIEW**

Simple asphyxiant  
Contents under pressure  
Intentional misuse of this product can cause serious lung damage or death  
Keep at temperatures below 52°C / 125°F

**Appearance** Colorless

**Physical State** Compressed gas

**Odor** Odorless

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Principle Routes of Exposure

Inhalation.

Acute Toxicity

Inhalation

Simple asphyxiant. May cause suffocation by displacing the oxygen in the 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.

Intentional inhalation of helium balloon gas can cause asphyxiation, lung damage, and death.

Eyes

None known.

Skin

None known

Skin Absorption Hazard

No known hazard in contact with skin.

Ingestion

None known

Chronic Effects

None known

Aggravated Medical Conditions

None known

Environmental Hazard

See Section 12 for additional Ecological Information.



**Material Safety Data Sheet**  
**Helium, Compressed**

**AXCEL GASES**

Creation Date: 28.02.2008

MSDS No. : AX-15  
Page 2 / 6

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS-No	Volume %	Chemical Formula
Helium	7440-59-7	>99	He

**4. FIRST AID MEASURES**

**Eye Contact** None under normal use. Get medical attention if symptoms occur.

**Skin Contact** None under normal use. Get medical attention if symptoms occur.

**Inhalation** PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF INHALATION OVEREXPOSURE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS. Conscious inhalation victims should be assisted to an uncontaminated area and inhale fresh air. If breathing is difficult, administer oxygen. Unconscious persons should be moved to an uncontaminated area and, as necessary, given artificial resuscitation and supplemental oxygen. Treatment should be symptomatic and supportive.

**Ingestions** None under normal use. Get medical attention if symptoms occur.

**Notes to Physician** Treat symptomatically.

**5. FIRE FIGHTING MEASURES**

**Flammable Properties** Non-flammable

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Explosion Data**

**Sensitivity to Mechanical Impact** None

**Sensitivity to Static Discharge** None

**Specific Hazards Arising from the Chemical** Cylinders may rupture under extreme heat. Continue to cool fire exposed cylinders until flames are extinguished. Damaged cylinders should be handled only by specialists.

**Protective Equipment and Precautions for Firefighters** As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions** Ensure adequate ventilation. Evacuate personnel to safe areas. Use personal protective equipment. Monitor oxygen level.

**Environmental Precautions** Prevent spreading of vapors through sewers, ventilation systems and confined areas.

**Methods for Containment** Stop the flow of gas or remove cylinder to outdoor location if this can be done without risk. If leak is in container or container valve, contact us.



## Material Safety Data Sheet Helium, Compressed

**AXCEL GASES**

Creation Date: 28.02.2008

MSDS No. : AX-15  
Page 3 / 6

### 7. HANDLING AND STORAGE

#### Handling

Use only in ventilated areas. Never attempt to lift a cylinder by its valve protection cap. Protect cylinders from physical damage; do not drag, roll, slide or drop. When moving cylinders, even for short distance, use a cart designed to transport cylinders. Use equipment rated for cylinder pressure. Use backflow preventive device in piping. Never insert an object (e.g. wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing leak to occur.

Proper handling, storage of regulating equipment and cylinders is required to safely fill helium balloons. DO NOT ALLOW CHILDREN OR UNQUALIFIED PEOPLE TO OPERATE BALLOON FILLING EQUIPMENT. INTENTIONAL INHALATION OF HELIUM CAN CAUSE SERIOUS LUNG DAMAGE OR DEATH. A balloon filling helium regulator must be attached to the valve before it is opened.

Use an adjustable strap wrench to remove over-tight or rusted caps. Close valve after each use and when empty. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier.

Never put cylinders into trunks of cars or unventilated areas of passenger vehicles. Never attempt to refill a compressed gas cylinder without the owner's written consent. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit.

For additional recommendations consult rule number 18 & 20 of the Gas Cylinder Rules 2004.

#### Storage

Protect from physical damage. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency exits. Keep at temperatures below 52°C / 125°F. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Always store and handle compressed gas cylinders in accordance with rule no 21 of the Gas Cylinder Rules 2004.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Engineering Measures

Local exhaust ventilation to prevent accumulation of high concentrations and maintain air-oxygen levels at or above 19.5%.

#### Ventilation

Ensure adequate ventilation, especially in confined areas.

#### Personal Protective Equipment

##### Eye/Face Protection

Protection Wear protective eyewear (safety glasses).

##### Skin and Body Protection

Work gloves and safety shoes are recommended when handling cylinders.

##### Respiratory Protection

##### General Use

No special protective equipment required.

##### Emergency Use

Use positive pressure airline respirator with escape cylinder or self contained breathing apparatus for oxygen-deficient atmospheres (<19.5%).

##### Hygiene Measures

Wear suitable gloves and eye/face protection.



**Material Safety Data Sheet**  
**Helium, Compressed**

**AXCEL GASES**

Creation Date: 28.02.2008

MSDS No. : AX-15  
Page 4 / 6

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Colorless.	<b>Odor</b>	Odorless.
<b>Odor Threshold</b>	No information available.	<b>Physical State</b>	Compressed gas
<b>Flash Point</b>	No information available	<b>Autoignition Temperature</b>	No information available
<b>Decomposition Temperature</b>	No information available.	<b>Boiling Point/Boiling Range</b>	-268.9 °C / -452.1 °F
<b>Freezing Point</b>	No information available	<b>Molecular Weight</b>	4.00
<b>Water Solubility</b>	0.0094 vol/vol@0°C	<b>Evaporation Rate</b>	No information available
<b>Vapor Pressure</b>	No data available.	<b>Vapor Density</b>	0.14(air = 1)
<b>Gas Density</b>	(at 21.1°C/70°F) 0.0103 lb/ft <sup>3</sup> (0.165 kg/m <sup>3</sup> )	<b>VOC Content (%)</b>	Not applicable.
<b>Specific Vol. @21.1°C &amp; 1 atm</b>	97.09 ft <sup>3</sup> /lb (6.061 m <sup>3</sup> /kg)	<b>Critical Pressure</b>	33.0 psia (227 kPa abs)
<b>Flammability Limits in Air</b>			
<b>Upper</b>	Not applicable		
<b>Lower</b>	Not applicable		

**10. STABILITY AND REACTIVITY**

<b>Stability</b>	Stable.
<b>Incompatible Products</b>	None Known.
<b>Conditions to Avoid</b>	None Known.
<b>Hazardous Decomposition Products</b>	None known based on information supplied.
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.

**11. TOXICOLOGICAL INFORMATION**

**Acute Toxicity**

<b>LD50 Oral:</b>	No information available.
<b>LD50 Dermal:</b>	No information available.
<b>LC50 Inhalation:</b>	No information available.
<b>Repeated Dose Toxicity</b>	No information available.

**Chronic Toxicity**

<b>Chronic Toxicity</b>	None known.
<b>Carcinogenicity</b>	Contains no ingredient listed as a carcinogen.
<b>Irritation</b>	No information available.
<b>Sensitization</b>	No information available.
<b>Reproductive Toxicity</b>	No information available.
<b>Developmental Toxicity</b>	Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals.
<b>Synergistic Materials</b>	None known.
<b>Target Organ Effects</b>	None known.



**Material Safety Data Sheet**  
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**AXCEL GASES**

Creation Date: 28.02.2008

MSDS No. : AX-15  
Page 5 / 6

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

**Ozone depletion potential; ODP; (R-11 = 1):** Does not contain ozone depleting chemical (40 CFR Part 82).

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Methods**

Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED WITH ANY VALVE OUTLET PLUGS OR CAPS SECURED AND VALVE PROTECTION CAP IN PLACE to Axcel Gases for proper disposal.

**14. TRANSPORT INFORMATION**

**DOT**

Proper shipping name	Helium, compressed
Hazard Class	2.2
Subsidiary Class	None
UN-Number	UN1046
Description	UN1046, Helium, compressed, 2.2

**ADR**

Proper Shipping Name	Helium, compressed
Hazard Class	2.2
UN-Number	UN1046
Classification Code	1A
Description	UN1046, Helium, compressed, 2.2

**15. REGULATORY INFORMATION**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	Yes
Reactive Hazard	No



**Material Safety Data Sheet**  
**Helium, Compressed**

**AXCEL GASES**

Creation Date: 28.02.2008

MSDS No. : AX-15  
Page 6 / 6

**16. OTHER INFORMATION**



**General :** Ensure all national/ local regulations are observed. The hazard of asphyxiation is often overlooked and must be stressed during operator training.

**Advice**

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