

## 1 PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT IDENTIFICATION

Product Name	Helium
Chemical Formula	He
Trade Names	Helium, Technical (N2.7) Helium, High Purity (N4.5) Helium, Instrument, Grade (N4.5) Helium, UHP (5.0) Helium Genie (N6.0) Helium, Research (N6.0)
Colour Coding	Mid Brown (B.07) body with the appropriate grade decal affixed centrally to the body of the cylinder (N.B. Research grade Helium does not have a decal on the cylinder)
Valves	All grades have the Neriki – Brass 5/8 inch BSP right hand, positive pressure valves fitted.
Company Identification	RAKEETH INDUSTRIAL GASES CO LLC 483/1 Street Al Sajaa industrial area Sharjah UAE, Mob. No: 0565264603 Tel No: 065265161
EMERGENCY No.	<b>997 civil defence UAE (24hrs)</b>



## 2 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Helium
Chemical Family	Inert Rare Gas
CAS No.	7440-59-7
UN No.	1046
ERG No.	121
Hazchem Warning	2 C Non flammable gas

## 3 HAZARDS IDENTIFICATION

**Main Hazards.** Helium does not support life. It can act as a simple asphyxiant by diluting the concentration of oxygen in air below the levels necessary to support life.

**Adverse Health Effects.** Helium is non-toxic and inert. Inhalation in excessive concentrations can result in dizziness, nausea, vomiting, loss of consciousness, and death. Death may result from errors in judgement, confusion or loss of consciousness which prevents self-rescue. At low oxygen concentrations, unconsciousness and death may occur in seconds without warning.

**Chemical Hazards.** Helium is extremely inert and forms no known chemical compounds.

**Biological Hazards.** Helium is extremely light and disperses very rapidly into the atmosphere. No known hazard.

**Vapour Inhalation.** As Helium acts as a simple asphyxiant death may result from errors in judgement, confusion, or loss of consciousness which prevents self-rescue. At low oxygen concentrations, unconsciousness and death may occur in seconds without warning.

<b>Eye Contact</b>	No known effects.
<b>Skin Contact</b>	No known effects.
<b>Ingestion</b>	(See "Vapour Inhalation" above).

## 4 FIRST AID MEASURES

Prompt medical attention is mandatory in all cases of overexposure to Helium. Rescue personnel should be equipped with self-contained breathing apparatus. Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be removed to an uncontaminated area, and given mouth-to-mouth resuscitation and supplemental oxygen.

<b>Eye Contact</b>	No known effect.
<b>Skin Contact</b>	No known effect.
<b>Ingestion</b>	(See section above).

## 5 FIRE FIGHTING MEASURES

**Extinguishing media** As Helium disperses rapidly into the atmosphere, it would have little effect on the fire. The appropriate extinguishant should be used for the type of combustible material involved.

**Specific Hazards** Helium does not support life. It can act as a simple asphyxiant by diluting the concentration of oxygen in the air below the levels to support life.

**Emergency Actions** If possible, shut off the source of excess helium. Evacuate area. All cylinders should be removed from the vicinity of the fire. Cylinders that cannot be removed should be cooled with water from a safe distance.

**Protective Clothing** Self contained breathing apparatus. Safety gloves and shoes, or boots, should be worn when handling cylinders.

**Environmental precautions.** As the gas is lighter than air, ensure that it is not trapped in confined spaces, otherwise this could lead to the formation of an oxygen- deficient atmosphere. Ventilate all confined spaces using forced draught if necessary.

## 6 ACCIDENTAL RELEASE MEASURES

**Personal Precautions** Do not enter any area where Helium has been spilled unless tests have shown that it is safe to do so.

<b>Environmental precautions</b>	Helium does not pose a hazard to the environment.
<b>Small spills</b>	Shut off the source of escaping Helium. Ventilate the area.
<b>Large spills</b>	Shut off the source of the spill if this can be done without risk. Restrict access to the area until completion of the clean-up procedure.

## 7 HANDLING AND STORAGE

Do not allow cylinders to slide or come into contact with sharp edges. Do not drag cylinders. Only use Genie cylinders in an upright position. Helium cylinders may be stacked horizontally provided that they are firmly secured at each end to prevent rolling. Do not store genie cylinders in the sun. Use a "first in - first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Keep out of reach of children.



## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational Exposure Hazards.** As Helium is a simple asphyxiant avoid any areas where spillage has taken place. Only enter once testing has proved the atmosphere to be safe.

**Engineering Control measures.** Engineering control measures are preferred to reduce the leakage of Helium into the atmosphere.

**Personal protection** Self-contained breathing apparatus should always be worn when entering area where oxygen depletion may have occurred. Safety goggles, gloves and shoes or boots should be worn when handling cylinders.

**Skin** No known effect.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL DATA

Chemical Symbol	He
Molecular Weight	4,003
Density of Gas 1atm and 21.1 °C	0.166kg/m <sup>3</sup>
Relative density (Air = 1) @ 101,325 kPa	0,138
Colour	None
Taste	None
Odour	None

## 10 STABILITY AND REACTIVITY

**Conditions to avoid** Never use cylinders as rollers or supports, or for any other purpose than the storage of Helium. Never expose the cylinder to excessive heat, as this may cause sufficient build-up of pressure to rupture the cylinders.

**Incompatible Materials.** As Helium is inert it may be contained in systems constructed of any of the common metals which have been designed to safely withstand the pressures involved.

**Hazardous Decomposition Products.** None<sup>11</sup>

## TOXICOLOGICAL INFORMATION

Acute Toxicity	No known effect.
Skin & eye contact	No known effect.
Chronic Toxicity	No known effect.
Carcinogenicity	No known effect.
Mutagenicity	No known effect.
Reproductive Hazards	No known effect

(For further information see Section 3. Adverse Health Effects).

**12 ECOLOGICAL INFORMATION** Helium does not pose a hazard to the ecology.

## 13 DISPOSAL CONSIDERATIONS

**Disposal Methods** Small amounts may be blown to the atmosphere under controlled conditions. Large amounts should only be handled by the gas supplier.

**Disposal of packaging** The disposal of cylinders must only be handled by the gas supplier.

## 14 TRANSPORT INFORMATION

### ROAD TRANSPORTATION

UN No.	1046
ERG No.	121
Hazchem warning	2C Non-flammable gas

### SEA TRANSPORTATION

IMDG	1046
Class	
Packaging group	
Label	Non-flammable gas

### AIR TRANSPORTATION

ICAO/IATA Code	1046
Class	2.2
Packaging group	
Packaging instructions	

- Cargo	200
- Passenger	200

### Maximum quantity allowed

- Cargo	150kg
- Passenger	75kg

Do not transport Genie cylinders with the wheel base attached.