

## **SAFETY DATA SHEET – HELIUM**

Version 1.2 – 16/3/2012

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

Product Identifier/Name: Helium

Chemical Formula: He

Uses of the substance: General Industrial.

Restrictions on use: No data available

Company Identification: Gas Link Wales Ltd

**Emergency Telephone No: 01443 222092**

**Email: [james@gaslinkwales.co.uk](mailto:james@gaslinkwales.co.uk)**

### **2. HAZARDS IDENTIFICATION:**

#### **Classification according to regulation 1272/2008 (CLP)**

Compressed Gas H280: Contains gas under pressure; may explode if heated.

#### **Label elements according to regulation 1272/2008 (CLP)**

Hazard pictograms/symbols



Signal Word: Warning

Hazard Statements: H280: Contains gas under pressure.  
May explode if heated.

Precautionary Statements: P403: Store in well-ventilated area.

#### **Other Hazards**

Use backflow prevention device  
High Pressure Gas.  
Can cause rapid suffocation.  
Self-contained breathing apparatus (SCBA) may be required

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### **3. COMPOSITION/ INFORMATION ON INGREDIENTS**

CAS Number:	7440-59-7
EEC Number:	231-168-5 (from EINECS)
Concentration/ purity:	100%
Classification (CLP)	Pressurised gas.

### **4. FIRST AID MEASURES**

#### **Description of first aid measures:**

General advice:	Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing has stopped
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Eye & Skin Contact:	In case of contact with eyes, rinse immediately with plenty of water. Adverse effects not expected on contact with skin.
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Ingestion:	Not considered a potential route of exposure
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Inhalation:	Move victim to fresh air. If breathing has stopped, apply artificial respiration. In case of shortness of breath, give oxygen. Keep victim warm and rested. Call Doctor.
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<b>Symptoms:</b>	Dizziness, Salivation, loss of coordination and mobility, vomiting and nausea. In extreme cases, loss of consciousness.
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### **5. FIRE FIGHTING MEASURES**

Suitable Extinguishing Media:	All known extinguishing media can be used.
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Specific Hazards:	Exposure to fire may cause containers to rupture/ explode. Non-flammable. Move away from container and cool cylinder with water from a protected position
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Advice for firefighters:	If necessary, use self-contained breathing apparatus.
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### **6. ACCIDENTAL RELEASE MEASURES**

- Personal Precautions: Evacuate area. Wear self-contained breathing apparatus when entering area. Monitor oxygen levels and ventilate area until proven safe.
- Environmental Precautions: Prevent discharge in any place where its accumulation could be dangerous. Prevent further leakage if safe to do so
- Clean Up Methods : Ventilate area.
- Additional advice: Increase ventilation to the release area and monitor concentrations. If leak is from cylinder or cylinder valve, call the Gas-Link Wales emergency number. If leak is in the users system, close the cylinder valve, safely vent the pressure, and safely vent the pressure before attempting repairs.

### **7. HANDLING AND STORAGE**

Store in segregated area away from combustible material.

Protect cylinders from physical damage; do not drag, roll, slide or drop. Do not allow storage area temperature to exceed 50°C (122°F). Only experienced and properly trained persons should handle compressed gases/cryogenic liquids. Before using the product determine its identity by reading the label. Know and understand the properties and hazards of the product before use. When in doubt as to the correct handling procedure for a particular gas, contact the supplier.

Do not remove or deface content identifying labels. When moving cylinders, even for short distances, use cylinder trolley or hand truck designed to transport cylinders. Leave valve protection guards in place. Secure cylinders against either a wall or bench or place in a cylinders stand. Before connecting cylinder, check the complete gas system for suitability, in particular check pressure rating and material compatibility. Open valve slowly. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier. Close cylinder valve after each use and when empty, even if still connected to equipment. Never attempt to repair or modify container valves or safety relief devices. Damaged valves should be immediately reported to the supplier.

Do not subject cylinders to abnormal mechanical shocks which may cause damage to their valve or safety devices. Never attempt to lift a cylinder by its valve protection cap or guard. Do not use cylinders as rollers or supports or for any purpose other than to contain the gas as supplied. Never strike an arc on a compressed gas cylinder or make a cylinder part of an electrical circuit. Do not smoke while handling product or cylinders. Never recompress a gas or a gas mixture. Never attempt to transfer gases from one cylinder to another. Always use backflow protection devices in piping. Never use direct flame or electrical heating devices to raise the pressure of a cylinder. Prolonged periods of cold temperature below -30°C (20F°) should be avoided. Suck back of water into container must be prevented. Purge air from system before introducing gas. Do not allow back feed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature.

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### **8. EXPOSURE CONTROLS/ PERSONAL PROTECTION**

**Control parameters:** No established exposure limits

**Exposure Controls:** Always used in a closed system. Provide Natural or mechanical ventilation to prevent accumulation above exposure limits. Systems should be regularly checked for leakage. Oxygen detectors should be used

#### **Personal protective equipment**

**Respiratory protection:** Self-contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen deficient atmosphere.  
Air purifying respirators will not provide protection. Users of breathing apparatus must be trained.

**Hand protection:** Sturdy work gloves are recommended for handling cylinders. The breakthrough time of the selected gloves must be greater than the intended use period.

**Eye protection:** Safety glasses recommended when handling cylinders.

**Skin & body protection:** Safety footwear is recommended when handling cylinders.

**Special instructions for protection and hygiene:** Ensure adequate ventilation, especially in confined areas.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/ Colour:	Compressed gas, Colourless gas.
Odour:	No odour warning properties
Odour threshold:	No data available
pH:	Not applicable
Melting point range:	-272 °C
Boiling point range:	-269 °C
Flash point:	Not applicable.
Evaporation Rate	Not applicable.
Flammability (solid/gas)	No data available
Upper/Lower	
Explosion/flammability limit:	No data available
Vapour pressure:	Not Applicable
Water solubility:	0.0015 g/l
Relative vapour density:	0.138 (air = 1)
Relative density:	No data available
Partition coefficient (n-octanol/water)	Not applicable
Auto ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	Not applicable.
Explosive properties:	No data available
Oxidizing properties:	No data available
Molecular weight:	4 g/mol
Density:	0.0002 g/cm <sup>3</sup> (0.012lb/ft <sup>3</sup> ) at 21°C (70°F) Note: (as vapour)
Specific volume:	6.0349 m <sup>3</sup> /kg at 21°C (70°F)

### 10. STABILITY AND REACTIVITY

Reactivity:	Refer to possibility of hazardous reactions and/or incompatible materials sections.
Chemical Stability:	Stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	No data available.
Hazardous decomposition products:	No data available.

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### **11. TOXICOLOGICAL INFORMATION**

#### **Information on toxicological effects.**

Effects on eyes:	In case of contact with eyes, seek medical advice
Effects on skin:	No adverse effect.
Inhalation effects:	May cause asphyxiation in high concentrations. Symptoms can include rapid loss of consciousness.
Ingestion effects:	ingestion is not considered a potential route of exposure.
Symptoms:	Exposure to oxygen deficient atmosphere may cause the following symptoms; dizziness, Salivation, Nausea, Vomiting, Loss of mobility/consciousness.
Acute oral toxicity:	No data available on the product itself.
Inhalation:	No data available on the product itself
Acute dermal Toxicity:	No data available on the product itself.
Skin corrosion/irritation:	No data available
Serious eye damage /eye irritation:	No data available
Sensitisation:	No data available.

#### **Chronic toxicity or effects from long-term exposure.**

Carcinogenicity:	No data available
Reproductive toxicity:	No data available on the product itself.
Gem cell mutagenicity:	No data available on the product itself.
Specific target organ systemic toxicity(single exposure):	No data available.
Specific target organ systemic toxicity(repeated exposure):	No data available on the product itself.
Aspiration hazard:	No data available.

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### **12. ECOLOGICAL INFORMATION**

#### **Toxicity**

Aquatic toxicity:	Not applicable
Toxicity to other organisms:	No data available on the product itself.
Persistence and degradability:	No data available on the product itself.
Bio accumulative potential:	No data available on the product itself.
Mobility in soil:	Ground or water pollution unlikely, due to high volatility.
Other adverse effects:	No ecological damage caused by this product

### **13. DISPOSAL CONSIDERATIONS**

Waste treatment methods:	Contact Gas Link Wales if guidance is required. Return unused product in original cylinder to supplier.
Contaminated packaging:	Return cylinder to supplier.

### **14. TRANSPORT INFORMATION**

#### **ADR**

UN ID No. :	UN1046
Proper Shipping Name .	Helium, Compressed
Class/ Division :	2
Tunnel code :	(E)
Hazard Identification No. :	20
Label(s) :	2.2

#### **IATA**

UN ID No. :	UN1046
Proper Shipping Name .	Helium, Compressed
Class/ Division :	2.2
Label(s) :	2.2

#### **IMDG**

UN ID No. :	UN1046
Proper Shipping Name .	Helium, Compressed
Class/ Division :	2.2
Label(s) :	2.2

#### **RID**

UN ID No. :	UN1046
Proper Shipping Name .	Helium, Compressed
Class/ Division :	2
Label(s) :	2.2

Avoid transport on vehicles where the load space is not separated from the driver's compartment.  
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or emergency.

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### **15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture,

<b>Country</b>	<b>Regulatory List</b>	<b>Notification</b>
USA	TSCA	Included on Inventory
EU	EINECS	Included on Inventory

WGK Identification Number: Not water endangering.

### **Chemical Safety Assessment**

This product does not meet the minimum volume threshold. CSA is not required.

### **16. OTHER INFORMATION**

Ensure all national/ local regulations are observed.

Hazard statements: H280 Contains gas under pressure; may explode if heated.

Cylinder Identification: Gas Link Wales / Gas Link Group.

### **DISCLAIMER**

Details given in this document are believed correct at the time of going to press.

Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

***For more information contact Gas Link Wales on 01443 222092***