



## MATERIAL SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

#### 1.1 Product identifier

**Product name** HELIUM, COMPRESSED  
**Synonym(s)** • HELIUM

#### 1.2 Uses and uses advised against

**Use(s)** BALLOON GAS • DEEP DIVING APPLICATIONS • GAS CHROMATOGRAPHY • INDUSTRIAL APPLICATIONS • LASER APPLICATIONS • SHIELDING GAS FOR WELDING

#### 1.3 Details of the supplier of the product

**Supplier name** WA GASES PTY LTD  
**Address** 11 Longitude Avenue Neerabup, Western Australia 6031  
**Telephone** 0472 686 009  
**Fax**  
**Website** [www.wagases.com.au](http://www.wagases.com.au)

#### 1.4 Emergency telephone number(s)

**Emergency** 000

### 2. HAZARDS IDENTIFICATION


#### 2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA **GHS**

**classification(s)** Gases Under Pressure: Compressed gas

#### 2.2 Label elements



**Signal word** **WARNING** **Pictogram(s)**  **Hazard statement(s)**  
H280 Contains gas under pressure; may explode if heated.

#### Prevention statement(s)

None allocated.

#### Response statement(s)

None allocated.

#### Storage statement(s)

P410 + P403 Protect from sunlight. Store in a well-ventilated place.

#### Disposal statement(s)

None allocated.

#### 2.3 Other hazards

Asphyxiant. Effects are proportional to oxygen displacement.

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### 3. COMPOSITION/ INFORMATION ON INGREDIENTS

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#### 3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content (v/v)
HELIUM	7440-59-7	231-168-5	>99.99%

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### 4. FIRST AID MEASURES

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#### 4.1 Description of first aid measures

**Eye**                                None required.

**Inhalation** If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator or Self Contained Breathing Apparatus (SCBA). Apply artificial respiration if not breathing. Give oxygen if available. For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor.

**Skin**                                None required.

**Ingestion**                        Due to product form and application, ingestion is considered unlikely.

**First aid facilities**                No information provided.

#### 4.2 Most important symptoms and effects, both acute and delayed

In high concentrations may cause asphyxiation. Symptoms may include loss of mobility / consciousness. Victim may not be aware of asphyxiation.

#### 4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

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### 5. FIRE FIGHTING MEASURES

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#### 5.1 Extinguishing media

Use water fog to cool containers from protected area.

#### 5.2 Special hazards arising from the substance or mixture

Non flammable.

#### 5.3 Advice for firefighters

Temperatures in a fire may cause cylinders to rupture. Cool cylinders or containers exposed to fire by applying water from a protected location. Remove cool cylinders from the path of the fire. Evacuate the area if unable to keep cylinders cool. Do not approach cylinders or containers suspected of being hot.

#### 5.4 Hazchem code

2T

2                Fine Water Spray.

T                Wear full fire kit and breathing apparatus. Dilute spill and run-off.

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### 6. ACCIDENTAL RELEASE MEASURES

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#### 6.1 Personal precautions, protective equipment and emergency procedures

If the cylinder is leaking, evacuate area of personnel. Inform manufacturer/supplier of leak. Use Personal Protective Equipment (PPE) as detailed in Section 8 of the SDS.

#### 6.2 Environmental precautions

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

## PRODUCT NAME **HELIUM, COMPRESSED**

### **6.3 Methods of cleaning up**

Carefully move material to a well ventilated remote area, then allow to discharge if safe to do so. Do not attempt to repair leaking valve or cylinder safety devices.

### **6.4 Reference to other sections**

See Sections 8 and 13 for exposure controls and disposal.

## **7. HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Use of safe work practices are recommended to avoid inhalation. Do not drag, drop, slide or roll cylinders. The uncontrolled release of a gas under pressure may cause physical harm. Use a suitable hand truck for cylinder movement.

### **7.2 Conditions for safe storage, including any incompatibilities**

Cylinders should be stored below 45°C in a secure area, upright and restrained to prevent cylinders from falling. Cylinders should also be stored in a dry, well ventilated area constructed of non-combustible material with firm level floor (preferably concrete), away from areas of heavy traffic and emergency exits.

### **7.3 Specific end use(s)**

No information provided.

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

### **8.1 Control parameters**

#### **Exposure standards**

Ingredient	Reference	T /A		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Helium	SWA (AUS)	Asphyxiant			

#### **Biological limits**

No biological limit values have been entered for this product.

### **8.2 Exposure controls**

**Engineering controls** Provide suitable ventilation to minimise or eliminate exposure. Confined areas (e.g. tanks) should be adequately ventilated or gas tested.

#### **PPE**

<b>Eye / Face</b>	Wear safety glasses.
<b>Hands</b>	Wear leather gloves.
<b>Body</b>	Wear coveralls and safety boots.
<b>Respiratory</b>	Where an inhalation risk exists, wear Self Contained Breathing Apparatus (SCBA) or an Air-line respirator.



## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1 Information on basic physical and chemical properties**

<b>Appearance</b>	COLOURLESS GAS
<b>Odour</b>	ODOURLESS
<b>Flammability</b>	NON FLAMMABLE
<b>Flash point</b>	NOT RELEVANT
<b>Boiling point</b>	-268.9°C

**PRODUCT NAME    HELIUM, COMPRESSED**

Melting point	NOT AVAILABLE
Evaporation rate	NOT APPLICABLE
pH	NOT APPLICABLE
Vapour density	NOT AVAILABLE
Specific gravity	NOT APPLICABLE
Solubility (water)	NOT AVAILABLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE

**9.1 Information on basic physical and chemical properties**

Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

**9.2 Other information**

Critical temperature	-268°C
Density	0.138 (Air = 1)
% Volatiles	100 %
Critical pressure	229 kPa

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**10. STABILITY AND REACTIVITY**

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**10.1 Reactivity**

Carefully review all information provided in sections 10.2 to 10.6.

**10.2 Chemical stability**

Stable under recommended conditions of storage.

**10.3 Possibility of hazardous reactions**

Polymerization will not occur.

**10.4 Conditions to avoid**

Avoid shock, friction, heavy impact, heat, sparks, open flames and other ignition sources.

**10.5 Incompatible materials**

Compatible with most commonly used materials.

**10.6 Hazardous decomposition products**

This material will not decompose to form hazardous products other than that already present.

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**11. TOXICOLOGICAL INFORMATION**

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**11.1 Information on toxicological effects**

Acute toxicity	Based on available data, the classification criteria are not met.
Skin	Not classified as a skin irritant.
Eye	Not classified as an eye irritant.
Sensitization	Not classified as causing skin or respiratory sensitisation.
Mutagenicity	Not classified as a mutagen.
Carcinogenicity	Not classified as a carcinogen.
Reproductive	Not classified as a reproductive toxin.
STOT – single exposure	Asphyxiant. Effects are proportional to oxygen displacement. Over exposure may result in dizziness, drowsiness, weakness, fatigue, breathing difficulties and unconsciousness.
STOT – repeated exposure	Not classified as causing organ effects from repeated exposure.

PRODUCT NAME    **HELIUM, COMPRESSED**  
Aspiration                      Not classified as causing aspiration.

12. ECOLOGICAL INFORMATION

- 12.1 Toxicity**  
No information provided.
- 12.2 Persistence and degradability**  
No information provided.
- 12.3 Bioaccumulative potential**  
No information provided.
- 12.4 Mobility in soil**  
No information provided.
- 12.5 Other adverse effects**  
Product is not harmful to the environment.

13. DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods**
- Waste disposal**                      Cylinders should be returned to the manufacturer or supplier for disposal of contents.
- Legislation**                      Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	1046	1046	1046
14.2 Proper Shipping Name	HELIUM, COMPRESSED	HELIUM, COMPRESSED	HELIUM, COMPRESSED
14.3 Transport hazard class	2.2	2.2	2.2
14.4 Packing Group	None Allocated	None Allocated	None Allocated

- 14.5 Environmental hazards**                      No information provided    **14.6 Special precautions for user**
- Hazchem code**                      2T
- GTEPG**                      2C1
- EMS**                      F-C, S-V
- Other information**                      Ensure cylinder is separated from driver and that outlet of relief device is not obstructed. Refer to Commonwealth, State and Territory Dangerous Goods Legislation which contain requirements which affect gas storage and transport.

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## 15. REGULATORY INFORMATION

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

<b>Poison schedule</b>	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
<b>Classifications</b>	Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.  The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].
<b>Hazard codes</b>	None allocated.
<b>Risk phrases</b>	None allocated.
<b>Safety phrases</b>	None allocated.
<b>Inventory listing(s)</b>	<b>AUSTRALIA: AICS (Australian Inventory of Chemical Substances)</b> All components are listed on AICS, or are exempt.

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## 16. OTHER INFORMATION

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The storage of significant quantities of gas cylinders must comply with AS4332 The storage and handling of gases in cylinders.

APPLICATION METHOD: Gas regulator of suitable pressure and flow rating fitted to cylinder or manifold with low pressure gas distribution to equipment.

### **PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

### **HEALTH EFFECTS FROM EXPOSURE:**

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PRODUCT NAME    **HELIUM, COMPRESSED**

Additional information	ACGIH	American Conference of Governmental Industrial Hygienists
	CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
	CNS	Central Nervous System
	EC No.	EC No - European Community Number
	EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
	GHS	Globally Harmonized System
	GTEPG	Group Text Emergency Procedure Guide
	IARC	International Agency for Research on Cancer
	LC50	Lethal Concentration, 50% / Median Lethal Concentration
	LD50	Lethal Dose, 50% / Median Lethal Dose
	mg/m³	Milligrams per Cubic Metre
	OEL	Occupational Exposure Limit
	pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
	ppm	Parts Per Million
	STEL	Short-Term Exposure Limit
	STOT-RE	Specific target organ toxicity (repeated exposure)
Abbreviations	STOT-SE	Specific target organ toxicity (single exposure)
	SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
	SWA	Safe Work Australia
	TLV	Threshold Limit Value
	TWA	Time Weighted Average

Revision history	Revision	Description
	2.0	Standard SDS Review
	1.1	Standard SDS Review
	1.0	Initial SDS creation

[ End of SDS ]