


SAFETY DATA SHEET
Material Name: Helium, Compressed Gas

Section 1 – Product and Company Identification	
Product Identifier:	Helium, Compressed
Other means of identification:	Helium, Medical helium, Helium N25, Helium N45, Helium N50, Helium N55, Lasal 4, Lasal 2004, Helium HG, Helium Ballon, Helium flotation
Product Uses:	Industrial and professional uses. Perform risk assessment prior to use. Test gas/Calibration gas. Laboratory use. Purge gas, diluting gas, inerting gas. Purging. Use for manufacture of electronic/photovoltaic components. Shield gas for welding processes.
Supplier Details:	Western Gasco Cylinders Ltd. 2169 Peardonville Road Abbotsford BC V2T 6J7
Emergency Phone Number:	(613)996-6666

Section 2 – Hazards Identification	
Classification in accordance with paragraph (d) of §1910.1200	Gas Under Pressure – Compressed gas Simple asphyxiant
Signal word	Warning
Hazard statement(s)	H280 - Contains gas under pressure; may explode if heated.
Symbol	
Precautionary statement	<p>Read completely and follow all Safety Data Sheets before use</p> <p>Colorless, odorless gas</p> <p>Asphyxiant in high concentrations. Not classified as PBT or vPvB. The substance/mixture has no endocrine disrupting properties</p>
Hazards not otherwise classified	None
Toxicity	Non-toxic but may displace oxygen which can cause dizziness, unconsciousness and death by asphyxiation.

Section 3 – Compositions / Information of Ingredients	
Chemical Name & Formula	Helium, He

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Common Name and Synonyms	Helium, Medical helium, Helium N25, Helium N45, Helium N50, Helium N55, Helium HG, Helium Ballon, Helium flotation
CAS Number	7440-59-7 Helium
Purity	Nominally 100%, typically provided >99%, by volume.

Section 4 – First Aid Measures	
Inhalation	Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Perform cardiopulmonary resuscitation if breathing stopped
Skin Contact	Adverse effects not expected from this product
Eye Contact	Adverse effects not expected from this product
Ingestion	Not an expected route of exposure, refer to inhalation section above.
Most important symptoms, effects, acute and delayed	In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. See section 11
Immediate medical attention and special treatment needed	If symptoms occur, seek medical advice and attention.

Section 5 – Fire Fighting Measures	
Suitable extinguishing media	Water spray or fog Product does not burn, use fire control measures appropriate for the surrounding fire
Special hazards arising (e.g. nature of any hazardous combustion process)	Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes if possible. Move containers away from the fire area if this can be done without risk.

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Special protective equipment and precautions for firefighters	In confined space use self-contained breathing apparatus. Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask. Standard EN 469 - Protective clothing for firefighters. Standard - EN 659: Protective gloves for firefighters.
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Section 6 – Accidental Release Measures	
Personal precautions, protective equipment, emergency procedures	<p>First responders should ensure oxygen concentration in area is safe (>19.5%) or be trained and use self-contained breathing apparatus before attempting to rescue a victim.</p> <p>Evacuate personnel to safe area, do not allow personnel to walk or drive in area that is potentially oxygen deficient.</p> <p>Use oxygen monitors to ensure adequate oxygen levels.</p> <p>Never enter suspected oxygen deficient area without being properly trained and wearing a self-contained breathing apparatus.</p>
Methods and materials for containment and clean up	Ventilate area

Section 7 – Handling and Storage	
Precautions for safe handling	Do not breathe gas. Avoid release of product into atmosphere. The product must be handled in accordance with good industrial hygiene and safety procedures. Only experienced and properly instructed persons should handle gases under pressure. Consider pressure relief device(s) in gas installations. Ensure the complete gas system was (or is regularly) checked for leaks before use. Do not smoke while handling product. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Avoid suck back of water, acid and alkalis.

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Conditions for safe storage, including any incompatibilities	Observe all regulations and local requirements regarding storage of containers. Containers should not be stored in conditions likely to encourage corrosion. Container valve guards or caps should be in place. Containers should be stored in the vertical position and properly secured to prevent them from falling over. Stored containers should be periodically checked for general condition and leakage. Keep container below 50°C in a well ventilated place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible materials
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Section 8 – Exposure Controls / Personal Protection	
Permissible exposure limits	There are no exposure limits for this product. Oxygen levels should be kept above 19.5% for all personnel.
Appropriate Engineering Controls	Provide adequate general and local exhaust ventilation. Systems under pressure should be regularly checked for leakages. Oxygen detectors should be used when asphyxiating gases may be released. Consider the use of a work permit system e.g. for maintenance activities
Individual protection measures / personal protective equipment	A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk. The following recommendations should be considered: PPE compliant to the recommended EN/ISO standards should be selected

Section 9 – Physical and Chemical Properties			
Property	Value	Property	Value

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Appearance	Colorless	Upper/Lower Explosive Limit	NA
Odor	Odorless	Vapor Pressure	NA
Odor Threshold	NA	Vapor Density	NA
Molecular Weight	28.01 g/mol	Specific Volume	NA
pH	NA	Relative Density to Air (=1)	0.14
Melting / Freezing Point	-272 °C	Solubility	1.5 mg/
Boiling Point	-269 °C	Partition Coefficient: noctanol / water	NA
Flash Point	NA	Auto Ignition Temperature	NA
Evaporation Rate	NA	Decomposition Temperature	NA
Flammability	Non-flammable	Viscosity (dynamic)	No reliable data available

Section 10 – Stability and Reactivity

Reactivity	No reactivity hazard other than the effects described in sub-sections below
Chemical Stability	Stable at normal temperatures and pressures
Possibility of Hazardous Reactions	None typically but will react with metals such as lithium, titanium, and magnesium at high temperatures.
Conditions to Avoid	Avoid moisture in installation systems.
Incompatible Materials	For additional information on compatibility refer to ISO 11114.
Hazardous Decomposition Products	None


Section 11 Toxicology Information

Information on likely routes of exposure	No chemical toxicity Inhalation – simple asphyxiant Ingestion – not an expected route Skin – no effects expected normally, cold gas may cause frostbite Eye – no effects expected normally, cold gas may cause frostbite
Symptoms related to physical, chemical, toxicological characteristics	As a simple asphyxiant, the presence of high concentrations causing an oxygen deficiency in air has symptoms which include dizziness, drowsiness, nausea, unconsciousness, and death.

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Section 12 – Ecological Information	
Ecotoxicity	None
Persistence and degradability	Not applicable. Normal air is approximately 78% nitrogen by volume.
Bio-accumulative potential	No information available
Mobility in Soil	No information available
Other Adverse effects	No known other effects
Delayed, Immediate, chronic effects from short and long term exposure	As a simple asphyxiant, the immediate effects of high concentrations causing oxygen deficiency in air include dizziness, drowsiness, nausea, unconsciousness, and death.
Numerical measures of toxicity	LD50 – not available LC50 – not available
Carcinogen Listing	Not carcinogenic

Section 13 – Disposal Considerations	
Waste residues and disposal guidelines	Product will normally dissipate in air. Dispose of any contents or containers in accordance with applicable regulations. Cylinders should be returned in original shipping container/method with any valves closed and protective plugs or caps securely in place.

Section 14 – Transport Information	
US DOT UN ID Number	UN1046
UN Proper Shipping Name	Helium, compressed
DOT Transportation Hazard Class	DOT Class 2.2 (Non-Flammable compressed gas) <div style="text-align: right;">  </div>
Packing Group	Not Applicable
Environmental Hazards	None
Transport Bulk Codes	Not Applicable

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Special Precautions	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 an emergency. Before transporting product containers: - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.
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Section 15 - Regulatory Information

US Federal TSCA 8(a) CDR - exempted
US EPA SARA Title III Section 312 hazard Category: Sudden release of pressure hazard US
States Right-To-Know Lists: Massachusetts, New Jersey, Pennsylvania

Section 16 – Other Information

Training advice : The hazard of asphyxiation is often overlooked and must be stressed during operator training. For more guidance, refer to EIGA SL 01 “Dangers of Asphyxiation”, downloadable at <http://www.eiga.eu>. Further information : Classification in accordance with the procedures and calculation methods of Regulation (EC) 1272/2008 (CLP). Key literature references and sources of data are maintained in EIGA doc 169 : 'Classification and Labelling Guide', downloadable at <http://www.Eiga.eu> . Full text of H- and EUH-statements H280 Contains gas under pressure; may explode if heated. Press. Gas (Comp.) Gases under pressure : Compressed gas **DISCLAIMER OF LIABILITY** : Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out. Details given in this document are believed to be 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.

Physical Hazards: 3

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USE OF THIS INFORMATION:

Western Gasco Cylinders Inc. offers this information to promote the safe use of this product through awareness of hazards and safety information. Those who use or transport or sell this product to others should: 1) Disseminate this information internally to all workplace areas, employees, agents and contractors likely to encounter this product

- 2) Provide supplemental hazards awareness, safety information, operation and maintenance procedures to the workplace areas and employees, agents and contractors likely to encounter this product
- 3) Furnish this information to all their customers who purchase this product
- 4) Ask each purchaser or user of the product to notify its employees and customers of the product hazards and safety information.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES:

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