

**SAFETY DATA SHEET**Revised edition no : 2
Date : 12/05/2014**Helium**

PG 016

SECTION 1. IDENTIFICATION OF THE PRODUCT AND COMPANY UNDERTAKING

| | |
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| Trade Name | Helium |
| Chemical Family | Inorganic, gas |
| Chemical Name | Helium |
| Synonyms | MTG MSDS 48; HELIUM GAS; HELIUM COMPRESSED; HELIUM-4; ATOMIC HELIUM; UN 1046; He; RTECS: MH6520000 |
| Chemical Abstract no | N/A |
| NIOSH No | N/A |
| UN no | N/A |
| Company: | Puregas (Pty) Ltd PO Box 123884, Alrode, 1451, South Africa Tel : (011) 903 9760 Fax: (011) 903 9766 Cellphone: 082 889 6946 (1 st) 082 885 7475 (2 nd) Info@puregas.co.za Emergency Tel: 0800 172 743 (Rapid Spill Response) |

SECTION 2. HAZARDS IDENTIFICATION

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| Main Hazard | Contains gas under pressure; may explode if heated. |
| Flammability | Highly Flammable |
| Chemical hazard | Gas under pressure, compressed gas |
| Signal Word | WARNING |
| Biological hazard | No data available |
| Precautionary Statement(s) | Protect from sunlight. Store in a well-ventilated place. |

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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| Hazardous components | Helium |
| EEC Classification | 7440-59-7 |
| R Phrases | N/A |



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SECTION 4. FIRST AID MEASURES

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| Inhalation | If adverse occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate attention. |
| Skin contact | Remove contaminated clothing and drench affected skin with plenty of water, then wash with soap and water. |
| Eye contact | OBTAIN MEDICAL ATTENTION Immediately wash out with plenty of water. |
| Ingestion | If large amount is swallowed. OBTAIN MEDICAL ATTENTION. |
| Note to Physicians | For Inhalation, consider oxygen. |
| Symptoms: Immediate | Suffocation |
| Symptoms: Delayed | No data available |

SECTION 5. FIRE-FIGHTING MEASURES

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| Specific Hazards Arising from the Chemical | Negligible fire hazard. Containers may rupture or explode to heat. |
| Extinguishing Media | Use extinguishing agents appropriate for surrounding fire. Large fires use water spray to keep containers cool. |
| Unsuitable Extinguishing Media | None known |
| Protective Equipment and Precaution For Firefighters | Wear full protective firefighting gear including self-contained breathing apparatus (SCBA) for protection against possible exposure. |
| Fire Fighting Measures | Move container from the fire area if it can be without risk. Cool container with water spray until well after the fire is out. Stay away from the ends of tanks. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck, evaluate radius: 800 meters |
| Hazardous Combustion Products | not applicable |

SECTION 6. ACCIDENTAL RELEASE MEASURES

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| Personal Precautions | Wear personal protective clothing and equipment, see Section 8 |
| Environmental Precautions | Avoid release to the environment. |
| Methods for Containment | Do not extinguish, unless leak can be stopped safely. Reduce vapors with water spray. Eliminate all ignition sources if safe to do so. Keep unnecessary people away. Isolate hazard area and deny entry. |
| Cleanup Methods | Avoid heat, flames, sparks and other sources of ignition. Ventilate closed spaces |

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| | before entering. Damaged cylinders should be handled only by specialist. |
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SECTION 7. HANDLING AND STORAGE

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| Handling Procedures | Avoid breathing gas. Use only adequate ventilation. |
| Storage Procedures | Store and handle in accordance with all current regulations and standards. Protect from sunlight. Store in a well-ventilated area. Subject to storage regulations: Keep separated from incompatible substances. |

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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| Component Exposure Limits | |
| HELIUM (7440-59-7) | |
| ACGIH: Simple asphyxiant | |
| Component Biological Limit Values | |
| There are no biological limit values for any of this product's components. | |
| Engineering Controls | |
| Provide local exhaust or enclosure ventilation system. Ventilation equipment should be explosion- resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits | |
| PERSONAL PROTECTIVE EQUIPMENT | |
| Respiratory Protection | Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use |
| Eyes/Face | Eye protection not required, but recommended |
| Glove Recommendations | Protective gloves are not required. |
| Protective Clothing | Protective clothing is not required |
| For Unknown Concentrations or immediately Dangerous to Life or Health- | Any supplied-air respirator with full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure- demand or other positive-pressure mode. Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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| Physical State: Gas Color: colorless Odor: Odorless Taste: Tasteless Melting/Freezing Point: -272 °C @26 atm | Appearance: Not available Physical Form: Gas Odor Threshold: Odorless pH: Not available Boiling Point: 269 °C |
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| Flash Point: Not available | Decomposition: Not available |
| UEL: Not available | LEL: Not available |
| Evaporation Rate: Not available | Vapor Pressure: 1719 mmhg @ -268 °C |
| Vapor Density (air = 1): 0.138 | Density: 0.1785 g/l # -268 °C |
| Water Solubility: 0.94 % @ 0 °C | LOG KOW: Not available |
| Auto Ignition: Not available | Viscosity: 0.02012 cP @ 26.8 °C |
| Molecular Weight: 4.0026 | Molecular Formula: He |
| Solvent Solubility Soluble: Alcohol | |

SECTION 10. STABILITY AND REACTIVITY

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| Chemical Stability | Stable at normal temperature and pressure. |
| Conditions to Avoid | Protect from physical damage and heat. Containers may rupture or explode if exposed to heat. Avoid inhalation of material or combustion by products. |
| Possibility of Hazardous Reactions | Will not polymerize |
| Incompatible Materials | No data available. |
| Decomposition Products | Not Applicable |

SECTION 11. TOXICOLOGICAL INFORMATION

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| Acute and Chronic Toxicity | |
| Component Analysis | The components of this material have reviewed in various sources and no selected endpoints have been identified. |
| RTECS Acute Toxicity (selected) | The components of this have been received and RTECS publishes no data as of the date on this document. |
| Immediate Effects | Suffocation |
| Delayed Effects | No data available |
| Irritation/Corrosivity Data | No animal testing data available for skin or eyes |
| RTECS Irritation | The components of this material have been reviewed and RTECS publishes no data as of the date on this document. |
| Respiratory Sensitizer | No data available |
| Dermal Sensitizer | No data available |
| Carcinogenicity | None of the product's components are listed by ACGIH, IARC, OSHA or DFG. |
| Component Carcinogenicity | No data available |
| Mutagenic Data | No data available |



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|---|-------------------|
| RTECS Mutagenic | No data available |
| Reproductive Effects Data | No data available |
| Tumorigenic Data | No data available |
| Specific Target Organ Toxicity - Repeated Exposure | Not applicable |
| Aspiration Hazard | None Known |
| Medical Conditions Aggravated by Exposure | |

SECTION 12. ECOLOGICAL INFORMATION

| | |
|--|---|
| Component Analysis - Aquatic Toxicity | No LOEL ecotoxicity data are available for this product's components. |
| Persistence and Degradability | No data available |
| Bioaccumulative Potential | No data available |
| Mobility in Environmental Media | No data available |

SECTION 13. DISPOSAL CONSIDERATIONS

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| Disposal methods | Dispose in accordance with all regulations. |
| Component Waste Numbers | The U.S. EPA has not published waste for this product's components. |

SECTION 14. TRANSPORT INFORMATION

| | |
|---------------------------|---|
| US DOT Information | UN DOT Information |
| | Shipping Name: Helium, compressed. |
| | UN/NA #: UN1046 Hazard Class: 2.2 |
| | Require Label (s): 2.2 |
| TDG Information | IMDG Information |
| | shipping name: Acetone |
| | UN #: UN1046 Hazard Class: 2.2 |



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SECTION 15. REGULATORY INFORMATION

Component Analysis

U. S. Federal Regulations

None of these products components are listed under SARA Section 302/304 (40 CFR Appendix A), SARA 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b) or require an OSHA process safety plan.

SARA 311/312 Hazardous Categories

Acute health: Yes Chronic Health: No Fire: No Pressure: Yes Reactive: No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

| Component | CAS | CA | MA | MN | NJ | PA |
|-----------|-----------|----|-----|-----|-----|-----|
| HELIUM | 7440-59-7 | No | Yes | Yes | Yes | Yes |

Not regulated under California Proposition 65

| Component | CAS | US | CA | EU | AU | PH | JP | KR | CN | NZ |
|-----------|-----------|-----|-----|-----|-----|-----|----|-----|-----|-----|
| ETHYLENE | 7440-59-7 | Yes | DSL | EIN | Yes | Yes | No | Yes | Yes | Yes |

SECTION 16. OTHER INFORMATION

NFPA Ratings: Health: 0 Fire: 0 Reactivity: 0

Hazard Scale; 0 = Minimal 1= Slight 2 = Moderate 3 = Serious 4 = Severe

All reasonable care has been exercised in processing your request for information on the chemical listed in this Material Safety Data Sheet. No warranty is made, either expresses or implied and Perisseuma Projects does not hold itself liable for any injury, illness, loss or misinterpretation arising from the use of this data.