SAFETY DATA SHEET

This document supersedes the MSDS revision 02 dated 24th May, 2023

REQUIREMENTS	DESCRIPTION
1. IDENTIFICATION AND COMPANY NAME	Product identifier: HELIUM Product type : Gas Product Origin : Qatar Produced by : BIGF Importer/Supplier: National Industrial Gas Plants Address: Salwa Industrial Area Street 45, Gate 75 - Doha Qatar P.O. Box: 1391 Telephone: : Head Office + 974 4468-9083, Sales: 4442-8844, Plant: 4450-00-08 Fax : Head Office +974 4458-3333, Sales: 4450-00-33, Plant: 4460-35-32 E-mail: nigp@qatar.net.qa , sales45@nigpqatar.com Emergency HOT LINE Tel.: + 974-7776-6277 Web Site: https://www.almanaholding.com.qa
2. HAZARD IDENTIFICATION	Hazard pictograms:  GHS04 – gases under pressure Signal word : Warning Hazard statements Main Hazards. Helium does not support life. It can act as a simple asphyxiate 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. Vapor Inhalation. As Helium acts as a simple asphyxiate 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. Prevention: Not applicable. Response: Not applicable. Storage: Protect from sunlight. Store in a well-ventilated place.

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3. COMPOSITION / INGREDIENT IDENTIFICATION	Chemical Name : Helium Chemical Family : Inert Rare Gas CAS No. 7440-59-7 UN No. 1046 Hazchem Warning : 2 C Non-flammable gas
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. Eye Contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs. Skin Contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. Ingestion : As this product is a gas, refer to the inhalation section (section 3, adverse health effects)
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 asphyxiate 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. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing gas. Environmental: Helium does not pose a hazard to the precautions environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Small spills: Shut off the source of escaping Helium. Ventilate the area. Large spills: 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. STORAGE AND HANDLING	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. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Keep out of reach of children.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION	Occupational Exposure Hazards: As Helium is a simple asphyxiate 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. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
9. PHYSICAL AND CHEMICAL PROPERTIES	Physical state : Gas (Compressed) Chemical Symbol : He Molecular Weight : 4 g/mole Density of Gas 1 atm and 21.1 °C : 0.166kg/m3 Relative density (Air = 1) @ 101,325 kPa : 0,138 Vapor density : 0.14 (Air = 1) Liquid Density@BP: 7.8 lb/ft3 (125 kg/m3) Melting point : -272.2°C (-458°F) Boiling Point : -268.9°C (-452°F) Partition coefficient: n-octanol/water : 0.28 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

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	constructed of any of the common metals which have been designed to safely withstand the pressures involved. Hazardous Decomposition Products: None
11. 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 <u>Potential acute health effects</u> Eye contact: Contact with rapidly expanding gas may cause burns or frostbite. Inhalation: No known significant effects or critical hazards. Skin contact: Contact with rapidly expanding gas may cause burns or frostbite. Ingestion: As this product is a gas, refer to the inhalation section.
12.ECOLOGICAL INFORMATION	Helium does not pose a hazard to the ecology
13. DISPOSAL CONSIDERATIONS	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products Via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. 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. : UN1046 ERG No. : 121 Hazchem warning: 2.2 Non-flammable gas  SEA TRANSPORTATION IMDG : 1046 Class Packaging group Label : Non-flammable gas AIR TRANSPORTATION ICAO/IATA Code : UN 1046 Class : 2.2 Packaging group Packaging instructions Cargo 200 Passenger 200

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	Maximum quantity allowed (DOT /IATA Classification) Cargo 150 kg Passenger 75 kg Do not transport Genie cylinders with the wheel base attached.
15. REGULATORY INFORMATION	U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined State of Qatar Regulations : Not determined
16. OTHER INFORMATION	**National Fire Protection Association (U.S.A.)** 

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