



SAFETY DATA SHEET

This document supersedes the MSDS revision 02 dated 17th June, 2021



Requirements	Description
1. IDENTIFICATION AND COMPANY NAME	<p>Product details: <u>MEDICAL OXYGEN, COMPRESSED</u></p> <p>Supplier Name: National Industrial Gas Plants Address: Salwa Industrial Area Street 45, Gate 75 - Doha Qatar P.O. Box: 1391 Telephone: : <u>Head Office</u> + 974 4468-9083, <u>Sales</u>: 4442-8844, <u>Plant</u>: 4450-00-08 Fax : <u>Head Office</u> +974 4458-3333, <u>Sales</u>: 4450-00-33, <u>Plant</u>: 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</p>
2. HAZARD IDENTIFICATION	<p>Hazard pictograms:</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>GHS03 – Oxidizing GHS04 – gases under pressure Signal word : Danger</p> <ul style="list-style-type: none"> • Hazard statements: H270-May cause or intensify fire; oxidizer. : H280-Contains gas under pressure; may explode if heated. • Precautionary statements - Prevention: P244- Keep valves and fittings free from oil and grease P220- Keep away from combustible materials. - Response : P370+P376- In case of fire: Stop leak if safe to do so. <p>Storage: Store in a well-ventilated place.</p>
3. COMPOSITION / INGREDIENT IDENTIFICATION	<p>Relevant identified uses: Industrial and professional. Perform risk assessment prior to use. Test gas / calibration gas. Laboratory use Contact supplier for more uses information. Use: Medical applications. UN Number : 1072 Chemical Formula : O₂ Substance Name : Oxygen Contents : 100% CAS No. : 7782-44-7 EC No. : 231-783-9 Annex No. : 008-001-00-8</p> <p>Contains no other components or impurities which will influence the classification of the product.</p>
4. FIRST AID MEASURES	<p>inhalation:</p> <ul style="list-style-type: none"> • Continuous inhalation of concentrations higher than 75% may cause nausea, dizziness, respiratory difficulty and convulsion. • Remove victim to uncontaminated area.



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	<p>Skin contact:</p> <ul style="list-style-type: none"> • Adverse effects not expected from this product. <p>Eye contact:</p> <ul style="list-style-type: none"> • Adverse effects not expected from this product. <p>Ingestion:</p> <ul style="list-style-type: none"> • Ingestion is not considered a potential route of exposure.
<p>5. FIRE-FIGHTING MEASURES</p>	<p>Suitable extinguishing:</p> <ul style="list-style-type: none"> • All known extinguishants can be used. <p>Specific hazards:</p> <ul style="list-style-type: none"> • Exposure to fire may cause containers to rupture/explode. Support combustion. <p>Specific methods:</p> <ul style="list-style-type: none"> • If possible, stop of product. • Coordinate fire measure to the surrounding fire. Cool endangered containers with water spray jet from a protected position. • Does not empty contaminated firewater into drains. • Move away from the container and cool with water from a protected position.
<p>6. ACCIDENTAL RELEASE MEASURES</p>	<p>Personal precautions:</p> <ul style="list-style-type: none"> • Try to stop release. • Evacuate area. • Ensure adequate air ventilation. • Eliminate ignition sources. <p>Personal precautions:</p> <ul style="list-style-type: none"> • Try to stop release. • Prevent from entering sewers, basements and work pits, or any place where its accumulation can be dangerous. <p>Clean up methods:</p> <ul style="list-style-type: none"> • Ventilate area.
<p>7. STORAGE AND HANDLING</p>	<p>Precautions for safe Handling:</p> <p>Safe use of the product</p> <ul style="list-style-type: none"> • Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. • Only experienced and properly instructed persons should handle gases under pressure. The product must be handled in accordance with good industrial hygiene and safety procedures. • Do not smoke while handling product. • Ensure the complete gas system was (or is regularly) checked for leaks before use. <p>Safe handling of the gas receptacle</p> <ul style="list-style-type: none"> • Refer to supplier's container handling instructions. • Do not allow back feed into the container. • Protect cylinders from physical damage; do not drag, roll, slide or drop. • When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. • Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use. • If user experiences any difficulty operating cylinder valve discontinue use and contact supplier. • Never attempt to repair or modify container valves or safety relief devices. Damaged valves should be reported immediately to the supplier. • Keep container valve outlets clean and free from contaminates particularly oil and water. • Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment. • Close container valve after each use and when empty, even if still connected to equipment. • Never attempt to transfer gases from one cylinder/container to another.

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	<ul style="list-style-type: none"> Never use direct flame or electrical heating devices to raise the pressure of a container. Do not remove or deface labels provided by the supplier for the identification of the cylinder contents. <p>Handling :</p> <ul style="list-style-type: none"> Use no oil or grease. Open valve slowly to avoid pressure shock. Suck back of water into the container must be prevented. Do not allow back feed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Keep away from ignition sources (including static discharges). Refer to supplier's container handling instructions. <p><u>Conditions for safe storage, including any incompatibilities</u></p> <ul style="list-style-type: none"> Keep container below 50°C in a well ventilated place. Observe all regulations and local requirements regarding storage of containers. Containers should not be stored in conditions likely to encourage corrosion. Containers should be stored in the vertical position and properly secured to prevent toppling. Stored containers should be periodically checked for general condition and leakage. Container valve guards or caps should be in place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible materials. Cylinders must be stored in an upright position and kept secured at all times Segregate from flammable gases and other flammable materials in store.
<p>8. EXPOSURE CONTROLS/ PERSONAL PROTECTION</p>	<p>Exposure controls:</p> <p>Appropriate engineering controls</p> <ul style="list-style-type: none"> Systems under pressure should be regularly checked for leakages. Provide adequate general and local exhaust ventilation. Consider work permit system e.g. for maintenance activities. <p>Individual protection measures e.g. personal protective equipment</p> <ul style="list-style-type: none"> 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. Wear safety glasses with side shields. Wear leather safety gloves and safety shoes when handling cylinders. <p>Personal protection</p> <ul style="list-style-type: none"> Do not smoke while handling product. Wear suitable protective clothing, gloves and eye/face protection. Avoid oxygen rich (>21%) atmospheres. Ensure adequate ventilation <p>Environmental exposure controls</p> <ul style="list-style-type: none"> Refer to local regulations for restriction of emissions to the atmosphere.
<p>9. PHYSICAL AND CHEMICAL PROPERTIES</p>	<p>Information on basic physical and chemical properties</p> <p>Appearance</p> <p>Physical state at 20°C /101.3kPa : Gas</p> <p>Colour : Colourless gas.</p> <p>Odour : No odour warning properties.</p> <p>Odour threshold : Odour threshold is subjective and in adequate to warn for over exposure.</p> <p>pH value : Not applicable for gas-mixtures.</p> <p>Molar mass [g/mol] : 32</p> <p>Melting point [°C] : -219 (-361.1°F)</p>

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	<p>Boiling point [°C] : -183 (-297.3°F) Critical temperature[°C] : -118 (-181.4°F) Flash point [°C] : Not applicable for gas-mixtures. Evaporation rate (ether=1) : Not applicable for gas-mixtures. Flammability range [vol% in air] : Oxidiser. Vapour pressure [20°C] : Not applicable Relative density, gas (air=1) : 1.1 Relative density, liquid (water=1) : 1.1 Solubility in water [mg/l] : 39 Partition co efficient n-octanol / water : Not applicable for gas-mixtures. Auto-ignition temperature [°C] : Not applicable. Viscosity at 20°C [mPa.s] : Not applicable. Explosive Properties : Not applicable. Molecular weight : 32 Dew Point °F (°C) : - 82 (-63.3) Specific Volume of gas : 0.752 m³/kg @ 70°F (21 °C)</p> <p><u>Other information</u> Other data: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.</p>
<p>10. STABILITY AND REACTIVITY</p>	<p>Reactivity:</p> <ul style="list-style-type: none"> No reactivity hazard other than the effects described in sub-sections below. <p>Chemical stability</p> <ul style="list-style-type: none"> Stable under normal conditions. <p>Possibility of hazardous reactions</p> <ul style="list-style-type: none"> Oxygen will accelerate burning of combustible materials. <p><u>Conditions to avoid</u></p> <ul style="list-style-type: none"> Avoid oil, grease and all other combustible materials. <p>Incompatible materials</p> <ul style="list-style-type: none"> May react violently with combustible materials. May react violently with reducing agents. Violently oxidizes organic material. Keep equipment free from oil and grease. <p>Hazardous decomposition products</p> <ul style="list-style-type: none"> Under normal conditions of storage and use, hazardous decomposition products should not be produced.
<p>11. TOXICOLOGICAL INFORMATION</p>	<p>Toxicology Information: No known toxicological effects from this product.</p>
<p>12. ECOLOGICAL INFORMATION</p>	<p>Ecological Effects Information: No known ecological effects from this product.</p>
<p>13. DISPOSAL CONSIDERATIONS</p>	<p>Waste treatment methods</p> <ul style="list-style-type: none"> May be vented to atmosphere in a well ventilated place. Do not discharge into any place where its accumulation could be dangerous. Refer to the code of practice of EIGA (Doc. 30/10 "Disposal of Gases, down loadable at http://www.eiga.org) for more guidance on suitable disposal methods. Contact supplier if guidance is required. <p>General</p> <ul style="list-style-type: none"> May be vented to atmosphere in a well ventilated place. Do not discharge into any place where its accumulation could be dangerous. Contact supplier if guidance is required. <p>PREPARING WASTES FOR DISPOSAL:</p> <ul style="list-style-type: none"> Waste disposal must be in accordance with appropriate Federal, State, and local regulations. Return cylinders with any residual product to MESA Specialty Gas & Equipment Inc. Do not dispose of locally.

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<p>14. TRANSPORT INFORMATION</p>	<p>UN Number: 1072 HS Code : 90192090 Labeling</p> <div style="display: flex; justify-content: center; align-items: center; gap: 20px;">   </div> <p>: 2.2 : Non Flammable, non toxic gas. : 5.1 : Oxidizing substances.</p> <p><u>Land transport (ADR/RID)</u> Proper shipping name : Oxygen, Compressed, 2.2 (5.1)</p> <p>Hazard class(es) : 2 Classification code : 10 Packing group : O Packing Instruction(s) : P200 Tunnel Restriction: E: Passage forbidden through tunnels of category E. HAZCHEM – Emergency Action Code: 2S 2 = Fine water spray. S = Risk of violent reaction or explosion. Recommended personal protective equipment: Full fire kit and breathing apparatus. Appropriate measures: dilute.</p> <p><u>Sea transport</u> Proper shipping name : Oxygen, Compressed Hazard class(es) : 2.2 Emergency Schedule (EmS) - Fire : F-C-S-W Emergency Schedule (EmS) - Spillage : S-W Packing Instruction(s) : P200 IMDG-Marine pollution: NO</p> <p><u>Air transport</u> Proper shipping name : Oxygen, Compressed Hazard class(es) : 2, 2.2 Passenger and Cargo Aircraft : Allowed Packing instruction – Passenger and Cargo Aircraft : 200</p> <p><u>Special precautions for user</u></p> <ul style="list-style-type: none"> • 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. <p>Before transporting product containers.</p> <ul style="list-style-type: none"> • Ensure there is adequate ventilation. • Ensure that containers are firmly secured. • Ensure cylinder 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. <p><u>Incase of spillage and/or leakage</u></p> <ul style="list-style-type: none"> • Clean up even minor leaks or spills if possible without unnecessary risk. <p><u>Other transport information</u></p> <ul style="list-style-type: none"> • 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

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	<p>the event of an accident or an emergency.</p> <ul style="list-style-type: none"> • Before transporting product containers: • Ensure that containers are firmly secured. • Ensure cylinder 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. • Ensure there is adequate ventilation. • Compliance with applicable regulations. <p><u>Personal precautions</u></p> <ul style="list-style-type: none"> • The driver shall not attempt to deal with any fire of the load. <p><u>Emergency action incase of accident</u></p> <ul style="list-style-type: none"> • Stop the engine • No naked lights. No smoking. • Mark road sand warns other road users. • Keep public away from danger area. • NOTIFY POLICE AND FIRE BRIGADE IMMEDIATELY.
<p>15. REGULATORY INFORMATION</p>	<p><u>Safety, health and environmental regulations/legislation specific for the substance or mixture</u></p> <ul style="list-style-type: none"> • EU Legislation / Seveso directive 96/82/EC : Not covered • National legislation: Ensure all national/local regulations are observed. : "Unscheduled Medicine regulated by TGA" • Chemical safety Assessment: A CSA does not need to be carried out for this product.
<p>16. OTHER INFORMATION</p>	<p>Indication of changes / Training advice</p> <ul style="list-style-type: none"> • Revised safety data sheet in accordance with commission regulation (EU) No.453/2010. • Ensure all national/local regulations are observed. • Receptacle under pressure. • Ensure operators understand the hazard of oxygen enrichment. <p>List of full text of R-phrases in section 3.</p> <ul style="list-style-type: none"> • R8: Contact with combustible material may cause fire. • H270-May cause or intensify fire; oxidizer. • H280-Contains gas under pressure; may explode if heated. <p>Further information</p> <ul style="list-style-type: none"> • Classification in accordance with calculation methods of regulation (EC) 1272/2008CLP / (EC) 1999/45DPD. <p>This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.</p>

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