



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>OXYGEN</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>   <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. <p>Hazard Class Category Code Regulation EC or mixture R Phrase(s) : <ul style="list-style-type: none"> • R8: Contact with combustible material may cause fire. </p> <p>Physical hazards : <ul style="list-style-type: none"> • Oxidizing gases – Category Danger – (CLP: Ox. Gas 1) – H270 • Gases under pressure – Compressed gas – warning – (CLP: Press. Gas) – H280 </p> <p>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. Storage: Protect from sunlight. Store in a well-ventilated place.</p>
3. COMPOSITION / INGREDIENT IDENTIFICATION	<p>Substance/Preparation : Substance UN Number : 1072 Components: This product is hazardous. Chemical Formula : O₂ Physical State : Gas Substance Name : Oxygen Contents : 100% CAS No. : 7782-44-7 EC No. : 231-783-9 Contains no other components or impurities which will influence the classification of the product.</p>



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4. FIRST AID MEASURES	inhalation: <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. Skin contact: <ul style="list-style-type: none"> • Adverse effects not expected from this product. Eye contact: <ul style="list-style-type: none"> • Adverse effects not expected from this product. Ingestion: <ul style="list-style-type: none"> • Ingestion is not considered a potential route of exposure.
5. FIRE-FIGHTING MEASURES	Suitable extinguishing: <ul style="list-style-type: none"> • All known extinguishants can be used. Specific hazards: <ul style="list-style-type: none"> • Exposure to fire may cause containers to rupture/explode. Support combustion. Oxygen will accelerate burning of combustible materials. Oxidant. Strongly supports combustion. May react violently with combustible materials. Specific methods: <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. Move away from the container and cool with water from a protected position.
6. ACCIDENTAL RELEASE MEASURES	Personal precautions: <ul style="list-style-type: none"> • Try to stop release. • Evacuate area. • Ensure adequate air ventilation. • Eliminate ignition sources. Personal precautions: <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. Clean up methods: <ul style="list-style-type: none"> • Ventilate area.
7. STORAGE AND HANDLING	Precautions for safe Handling: <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.

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	<ul style="list-style-type: none"> • 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. • 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. <p>The following recommendations should be considered.</p> <ul style="list-style-type: none"> • Wear safety glasses with side shields. • Wear leather safety gloves and safety shoes when handling cylinders. • Wash hands before breaks and at the end of work. • Protective clothing and PPE should be kept free of oil and grease, generally in clean condition PPE should be inspected and maintained regularly to retain effectiveness. <p>Personal protection</p> <ul style="list-style-type: none"> • Do not smoke while handling product. • Wear suitable hand, body and head protection. Wear goggles with suitable filter lenses when use is cutting / welding. • Avoid oxygen rich (>21%) atmospheres. • Ensure adequate ventilation <p>Additional information about design of technical systems:</p> <ul style="list-style-type: none"> • Adequate local ventilation. Safety showers and eyewash stations should be near by. The lists that were valid during the creation were used as basis. <p>Environmental exposure controls</p> <ul style="list-style-type: none"> • Refer to local regulations for restriction of emissions to the atmosphere.

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<p>9. PHYSICAL AND CHEMICAL PROPERTIES</p>	<p>Information on basic physical and chemical properties</p> <p><u>Appearance</u></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> <p>Boiling point [°C] : -183 (-297.3°F)</p> <p>Critical temperature [°C] : -118 (-181.4°F)</p> <p>Flashpoint [°C] : Not applicable</p> <p>Evaporation rate (ether=1) : Not applicable</p> <p>Flammability range [vol% in air] : Oxidiser.</p> <p>Vapour pressure [20°C] : Not applicable.</p> <p>Relative density, gas (air=1) : 1.1</p> <p>Relative density, liquid (water=1) : 1.1</p> <p>Solubility in water [mg/l] : 39</p> <p>Molecular weight : 32</p> <p>Dew Point °F (°C) : - 82 (-63.3)</p> <p>Specific Volume of gas : 0.752 m³/kg @ 70°F (21 °C)</p> <p>Partition coefficient n-octanol / water : Not know.</p> <p>Auto-ignition temperature [°C] : Not applicable.</p> <p>Viscosity at 20°C [mPa.s] : Not applicable.</p> <p>Explosive Properties : Not applicable.</p> <p><u>Other information</u></p> <p>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. Do not use oxygen as substitute for air, nitrogen or any other gas. Use only with equipment cleaned for oxygen service and for cylinder pressure. Use only oxygen approved lubricants and oxygen approved sealing. <p><u>Conditions to avoid</u></p> <ul style="list-style-type: none"> Avoid sparks, flames and other sources of ignition. Violently oxidizes organic material. <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.

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11. TOXICOLOGICAL INFORMATION	Toxicology Information: No known toxicological effects from this product.
12. ECOLOGICAL INFORMATION	Ecological Effects Information: No known ecological effects from this product.
13. DISPOSAL CONSIDERATIONS	<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, downloadable 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.
14. TRANSPORT INFORMATION	<p>UN number: 1072 HS Code : 28044090 Labeling:</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>: 2.2: Non Flammable, non toxic gas. : 5.1: Oxidizing substances.</p> <p><u>Land transport</u> Proper shipping name : Oxygen, Compressed Hazard class(es) : 2 Classification code : 10 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 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 Passenger and Cargo Aircraft : Allowed Packing instruction – Passenger and Cargo Aircraft : 200</p>

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	<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 min or leaks or spills if possible with out unnecessary risk.
<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. • Chemical safety Assessment: A CSA does not need to be carried out for this product. <p>Classification: Not listed as an extremely hazardous substance. : Not listed as toxic chemical. : Not listed as a regulated substance.</p>
<p>16. OTHER INFORMATION</p>	<p><u>Indication of changes</u></p> <ul style="list-style-type: none"> • Revised safety data sheet in accordance with commission regulation (EU) No453/2010. • 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 / H-statements 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-Containsgasunderpressure; 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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