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| | | Date : 15/9/2022 |
| | | Revised edition no :1 |
| | | Supersedes : 0/0/0 |
| Nitrogen (refrigerated) | | |



Label 2.2 : Non flammable, non toxic gas.


1- IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

| | |
|-------------------------|--|
| product name | Nitrogen (refrigerated) |
| Chemical formula | N ₂ |
| company | Gases for medical and industrial gases |
| Emergency phone numbers | 23818102/23818109/23818032 Hot line 19802 |

2- COMPOSITION/INFORMATION ON INGREDIENTS

| Substance/Preparation | | Substance | | | |
|-------------------------|----------|-----------|-----------|----------|----------------|
| Substance name | Index Nr | EEC No | CAS No | Contents | Classification |
| Nitrogen (refrigerated) | | 231-783-9 | 7729-37-9 | %100 | -- |

Contains no other components or impurities that will influence the classification of the product.

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3- HAZARDS IDENTIFICATION


| | |
|------------------------|--|
| Hazards identification | Refrigerated liquefied gas. Contact with product may cause cold burns or frostbite. In high concentrations may cause asphyxiation. |
|------------------------|--|

4- FIRSTAID MEASURES

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| Inhalation | In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. |
| Skin/eye contact | Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped. Immediately flush eyes thoroughly with water for at least 15 minutes. In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance. |
| Ingestion | Ingestion is not considered a potential route of exposure. |

5- FIRE FIGHTING MEASURES

| | |
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| Specific hazards | Exposure to fire may cause containers to rupture/explode. |
| Flammable Class | Non flammable |
| Hazardous combustion products | None |
| Suitable extinguishing media | All known extinguishants can be used. |
| Specific methods | If possible, stop flow of product. If leaking do not spray water onto container. Water surrounding area (from protected position) to contain fire. Move away from container away and cool with water from a protected position. In confined space |
| Special protective equipment for fire fighters | In confined space use self-contained breathing apparatus. |

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6- ACCIDENTAL RELEASE MEASURES


| | |
|---------------------------|--|
| Personal precautions | <p>Evacuate area</p> <p>Use protective clothing.</p> <p>Ensure adequate air ventilation.</p> <p>Wear self-contained breathing apparatus when entering Area unless atmosphere is proved to be safe.</p> |
| Environmental precautions | <p>Try to stop release.</p> <p>Prevent from entering sewers, basements and work pits, or any place where its accumulation can be dangerous</p> |
| Clean up methods | <p>Ventilate area.</p> |

7- HANDLING AND STORAGE

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| Storage | Keep the package at a temperature below 50°C in a well-ventilated place. |
| Handling | Water absorption into the container must be prevented. Do not allow back feeding into the container. Use only properly selected equipment appropriate for this product, supply pressure, and temperature. Contact Gases Company for Medical and Industrial Gases Egypt if in doubt. Refer to the instructions for handling containers of Gases Company for medical and industrial gases. |

8- EXPOSURE CONTROLS/PERSONAL PROTECTION

| | |
|---------------------|--|
| Personal protection | <p>Ensure adequate ventilation.</p> <p>Protect eyes, face and skin from liquid splashes.</p> |
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9- PHYSICAL AND CHEMICAL PROPERTIES

| | | | | | |
|------------------------|----------------------------|------------------------------------|---|---------------------------|----------------------------|
| Physical State at 20°C | Refrigerated liquefied gas | Critical temperature | -147 °C | Solubility mg/l water | 20 mg/l |
| Molecular weight | 28 | Relative density, gas (Air=1) | 0.97 | Appearance/Color | Colorless liquid |
| Melting point | -210 °C | Relative density, liquid (water=1) | 0.8 | Odor | No odor warning properties |
| Boiling point | -196 °C | Vapor Pressure | 20°C Not applicable | Auto ignition temperature | Not applicable |
| Flammability range | Oxidizer | Other data | Gas/vapor heavier than air. May accumulate in confined Spaces, particularly at or below ground. | | |

10- STABILITY AND REACTIVITY


| | |
|--------------------------|--|
| Stability and reactivity | Stable under normal conditions Liquid spillages can cause embrittlement of structural materials. |
|--------------------------|--|

11- TOXICOLOGICAL INFORMATION

| | |
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| General | No known toxicological effects from this product. |
|---------|---|

12- ECOLOGICAL INFORMATION

| | |
|---------|--------------------------------------|
| General | Can cause frost damage to vegetation |
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13- DISPOSAL CONSIDERATIONS

| | |
|---------|---|
| General | to the atmosphere in a well-ventilated place. Do not discharge into any place where its accumulation Contact a gas company for medical and industrial gases if necessary. |
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14- TRANSPORT INFORMATION

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|-----------------------------|--|
| UN Nr | 1977 |
| Proper shipping name | Nitrogen, Refrigerated liquid |
| Class/Div | 2.2 |
| ADR/RID Hazard Nr | 22 |
| Labeling ADR | Label 2.2: non flammable non toxic gas |
| Other transport information | 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 that they are firmly secured and: - Cylinder valve is closed and not leaking. - Valve outlet cap nut or plug (where provided) is correctly fitted. - Valve protection device (where provided) is correctly fitted. - There is adequate ventilation.-Compliance with applicable regulations. |

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15- OTHER INFORMATION

May cause frostbite Asphyxiant in high concentrations. Keep container in well ventilated place. Do not breathe the gas. Ensure all national/local regulations are observed. The hazard of asphyxiation is often overlooked and must be stressed during operator training. 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. This MSDS is for information purposes only and is subject to change without notice.

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