Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: SODIUM NITRITE 22% SOLUTION

Recommended Use of the Chemical: Water treatment.

Supplier: Ixom Operations Pty Ltd (Incorporated in Australia)
Street Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 368 2700
Facsimile: +64 9 368 2710
Emergency Telephone: 0 800 734 607 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the “Other Information” section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001.

SIGNAL WORD: WARNING

Subclasses:
Subclass 6.1 Category D - Substances which are acutely toxic.
Subclass 6.3 Category A - Substances that are irritating to the skin.
Subclass 6.4 Category A - Substances that are irritating to the eye.
Subclass 6.6 Category B - Substances that are suspected human mutagens.
Subclass 6.9 Category B - Substances that are harmful to human target organs or systems.
Subclass 9.1 Category B - Substances that are ecotoxic in the aquatic environment.
Subclass 9.3 Category C - Substances that are harmful to terrestrial vertebrates.

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Approval Number: HSR002684

3. COMPOSITION AND INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Proportion</th>
<th>Hazard Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium nitrite</td>
<td>7632-00-0</td>
<td>ca. 22%</td>
<td>H272 H301 H400</td>
</tr>
<tr>
<td>Other ingredient(s)</td>
<td></td>
<td>to 100%</td>
<td>-</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

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Inhalation:
Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:
If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

Eye Contact:
If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

Ingestion:
Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:
Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:
Not combustible, however, if material is involved in a fire use: Normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 3Z

Specific hazards arising from the substance or mixture:
Non-combustible material.

Special protective equipment and precautions for fire-fighters:
Decomposes on heating emitting toxic fumes, including those of oxides of nitrogen. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition. If safe to do so, remove containers from path of fire. Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:
Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:
Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid skin and eye contact and breathing in dust. Avoid handling which leads to dust formation. Keep out of reach of children.

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Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from foodstuffs. Do NOT store nor transport with ammonium salts. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace Exposure Standards: No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority.

Appropriate engineering controls:
Natural ventilation should be adequate under normal use conditions. If inhalation risk exists: Use with local exhaust ventilation or while wearing suitable mist respirator. Keep containers closed when not in use.

Individual protection measures, such as Personal Protective Equipment (PPE):
The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.

Wear overalls, chemical goggles and impervious gloves. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.
If determined by a risk assessment an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Colour: Light Yellow
Odour: Faint
Solubility: Miscible with water.
Specific Gravity: 1.15
Relative Vapour Density (air=1): Not available
Vapour Pressure (20 °C): Not available
Flash Point (°C): Not applicable
Flammability Limits (%): Not applicable
Autoignition Temperature (°C): Not applicable
Boiling Point/Range (°C): >100
pH: >8.5

10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions:
Reacts violently with reducing agents, ammonium salts, and cyanates. Hazardous polymerisation will not occur.
11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: Swallowing large amounts may result in in-coordination and fatigue, fever, convulsions and coma. Collapse and possible death may occur.

Eye contact: An eye irritant.

Skin contact: Contact with skin will result in irritation.

Inhalation: Breathing in mists or aerosols may produce respiratory irritation. Inhalation at high concentrations can result in breathing difficulties and possibly convulsions.

Acute toxicity: No LD50 data available for the product. For the constituent Sodium nitrite:
Oral LD50 (rat): 157.9 mg/kg.

Chronic effects: Harmful to human target organs or systems.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Avoid contaminating waterways.

Aquatic toxicity: Toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Disposal methods:
Refer to local government authority for disposal recommendations. Dispose of contents/container in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport
Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

UN No: 3082
Transport Hazard Class: 9 Miscellaneous Dangerous Goods
Packing Group: III
Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS SODIUM NITRITE)

Marine Transport
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No: 3082
Transport Hazard Class: 9  Miscellaneous Dangerous Goods
Packing Group: III
Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS SODIUM NITRITE)

IMDG EMS Fire: F-A
IMDG EMS Spill: S-F

Air Transport
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No: 3082
Transport Hazard Class: 9  Miscellaneous Dangerous Goods
Packing Group: III
Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS SODIUM NITRITE)

15. REGULATORY INFORMATION

Classification:
Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001.

Subclasses:
Subclass 6.1 Category D - Substances which are acutely toxic.
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16. OTHER INFORMATION


This safety data sheet has been prepared by Ixom Operations Pty Ltd Toxicology & SDS Services.
Reason(s) for Issue:
Product Name change
Change in Formulation

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.