Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **ALGANE 140**

Recommended Use of the Chemical and Restrictions on Use Water treatment.

Supplier: Ixom Operations Pty Ltd (Incorporated in Australia)
NZBN: 9429041465226
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; DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

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.

Water Treatment Chemicals (Subsidiary Hazard) Group Standard 2017
Approval Number: HSR002684

Hazard Statement(s):
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H341 Suspected of causing genetic defects.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
H433 Harmful to terrestrial vertebrates.

Precautionary Statement(s):

Prevention:
P102 Keep out of reach of children.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.
P273 Avoid release to the environment.

Response:
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P321 Specific treatment (see First Aid Measures on the Safety Data Sheet).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing before re-use.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P391 Collect spillage.

Storage:
P405 Store locked up.

Disposal:
P501 In case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Notice 2017. This may also include any method of disposal that must be avoided.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Sodium nitrite	7632-00-0	10-<30%	H272 H301 H319 H400
Sodium tetraborate pentahydrate	11130-12-4	<1%	H303 H319 H360
Sodium hydroxide	1310-73-2	<1%	H290 H314 H318 H335
Other ingredient(s)	-	to 100%	-

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 at once. Urgent hospital treatment is likely to be needed.

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: Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal protein foam can be used.

Hazchem or Emergency Action Code: · 3Z

Specific hazards arising from the chemical:
Non-combustible material. Environmentally hazardous.

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. Do not allow container or product to get into drains, sewers, streams or ponds. 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. When using do not eat, drink or smoke. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated place. 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. However, Workplace Exposure Standard(s) for constituent(s):

Borates, tetra, sodium salts: Pentahydrate WES-TWA 1 mg/m^3
Sodium hydroxide: Ceiling 2 mg/m^3

As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

WES - Ceiling (Workplace Exposure Standard - Ceiling). A concentration that should not be exceeded during any part of the working day.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:
Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

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:	White to Slightly Yellow
Odour:	Negligible

Solubility:	Miscible in water.
Specific Gravity:	1.10-1.25
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):	Not available
pH:	9.5-10.5

10. STABILITY AND REACTIVITY

Reactivity: Reacts violently with reducing agents , ammonium salts , cyanates .

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

Possibility of hazardous reactions: May react violently with reducing agents , ammonium salts , cyanates . Hazardous polymerisation will not occur.

Conditions to avoid: Avoid contact with foodstuffs.

Incompatible materials: Incompatible with acids , combustible materials , ammonium salts , reducing agents , cyanates .

Hazardous decomposition products: Oxides of nitrogen.

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

Skin corrosion/irritation: Irritant. The product has not been tested; the classification is based on the components of the mixture.

Serious eye damage/irritation: Irritant. The product has not been tested; the classification is based on the components of the mixture.

Respiratory or skin sensitisation: No information available.

Chronic effects:

Mutagenicity: No information available.

Carcinogenicity:	No information available.
Reproductive toxicity:	May damage fertility or the unborn child.
Specific Target Organ Toxicity (STOT) - single exposure:	No information available.
Specific Target Organ Toxicity (STOT) - repeated exposure:	No information available.
Aspiration hazard:	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Avoid contaminating waterways.
Persistence/degradability:	Biodegradation is not an applicable endpoint since the product is an inorganic chemical.
Bioaccumulative potential:	No information available.
Mobility in soil:	No information available.
Aquatic toxicity:	Toxic to aquatic organisms. May cause long lasting harmful effects to aquatic life.

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; 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)
Hazchem or Emergency Action Code:	· 3Z

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 Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

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

`Registry of Toxic Effects of Chemical Substances'. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinatti, 2019.

This safety data sheet has been prepared by Ixom Operations Pty Ltd (Toxicology & SDS Services).

Reason(s) for Issue:
5 Yearly Revised Primary SDS
Change in Hazardous Chemical Classification
Change in Exposure Controls

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.