Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **SPECTRUS NX1104**

Recommended Use of the Chemical and Restrictions on Use Water-based microbial control agent.

Supplier: Ixom Operations Pty Ltd
ABN: 51 600 546 512
Street Address: Level 8, 1 Nicholson Street
East Melbourne Victoria 3002
Australia

Telephone Number: +61 3 9906 3000
Emergency Telephone: **1 800 033 111 (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

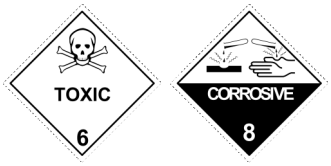
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:
Flammable liquids - Category 4
Acute Oral Toxicity - Category 4
Skin Corrosion - Sub-category 1B
Eye Damage - Category 1
Acute Inhalation Toxicity - Category 2

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:
Acute Aquatic Toxicity - Category 1

SIGNAL WORD: DANGER



Hazard Statement(s):
H227 Combustible liquid.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H330 Fatal if inhaled.
H400 Very toxic to aquatic life.

Precautionary Statement(s):

Prevention:
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking.
P260 Do not breathe mist, vapours, spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P284 Wear respiratory protection.
P273 Avoid release to the environment.

Response:
P370+P378 In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P320 Specific treatment is urgent (see First Aid Measures on this Safety Data Sheet).
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P321 Specific treatment (see First Aid Measures on Safety Data Sheet).
P363 Wash 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.
P391 Collect spillage.

Storage:
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:
P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

Poisons Schedule (SUSMP): S5 Caution.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
(C12-C16) Alkyl dimethyl benzyl ammonium chloride	68424-85-1	7-13%	H302 H314 H318 H400
Dodecylguanidine hydrochloride	13590-97-1	3-7%	H302 H311 H314 H330 H400
Isopropyl alcohol	67-63-0	1-5%	H225 H319 H336
Ethyl alcohol	64-17-5	1-5%	H225
Other component(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.

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 and soap. If swelling, redness, blistering or irritation occurs seek medical assistance.

Eye Contact:
Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre.

Ingestion:
Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Never give anything by the mouth to an unconscious patient. Get to a doctor or hospital quickly.

Indication of immediate medical attention and special treatment needed:
Treat symptomatically. Can cause corneal burns.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:
Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 2XE

Specific hazards arising from the chemical:
Combustible liquid. Corrosive substance. Environmentally hazardous.

Special protective equipment and precautions for fire-fighters:
On burning will emit toxic fumes, including those of oxides of carbon . Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion. Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:
Shut off all possible sources of ignition. 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

Classified as a C1 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

This material is a Scheduled Poison S5 and must be stored, maintained and used in accordance with the relevant regulations.

Precautions for safe handling:
Avoid skin and eye contact and breathing in vapour, mists and aerosols. When using do not eat, drink or smoke. Wash thoroughly after handling. Take precautionary measures against static discharges. Keep out of reach of children.

Conditions for safe storage, including any incompatibilities:
Store in a cool, dry, well ventilated place. Do not allow to freeze. Store away from sources of heat or ignition. Store away from foodstuffs. 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

Control Parameters: No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Ethyl alcohol: 8hr TWA = 1880 mg/m^3 (1000 ppm)
Isopropyl alcohol: 8hr TWA = 983 mg/m^3 (400 ppm), 15 min STEL = 1230 mg/m^3 (500 ppm)

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

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, CHEMICAL GOGGLES, RUBBER BOOTS, AIR MASK , GLOVES (Long), APRON.
* Not required if wearing air supplied mask.

Wear overalls, chemical goggles, face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. 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 an air supplied respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Colourless to Yellow
Odour:	Mild
Solubility:	Miscible in water.
Specific Gravity:	0.989 @21°C
Relative Vapour Density (air=1):	<1.00
Vapour Pressure (20 °C):	ca. 18 mm Hg
Flash Point (°C):	66 (PMCC)
Flammability Limits (%):	Not available
Autoignition Temperature (°C):	Not available
Boiling Point/Range (°C):	191
pH:	ca. 3.4
Viscosity:	25 cPs @21°C
Freezing Point/Range (°C):	-2

10. STABILITY AND REACTIVITY

Reactivity:	No information available.
Chemical stability:	Stable under normal conditions of use.
Possibility of hazardous reactions:	Contact with strong oxidising agents may cause fire. Hazardous polymerisation will not occur.
Conditions to avoid:	Avoid exposure to heat, sources of ignition, and open flame. Do not allow product to freeze. Avoid aerosol formation.
Incompatible materials:	Incompatible with strong oxidising agents.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Hydrogen chloride. Ammonia. Amines.

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 can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.

Eye contact: A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury.

Skin contact: Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.

Inhalation: Breathing in vapour may produce respiratory irritation.

Acute toxicity:
Oral LD50 (rat): 1750 mg/kg
Dermal LD50 (rabbit): >5000 mg/kg
Inhalation LC50 (rat): 0.06-0.55 mg/L/4hour

Skin corrosion/irritation: Causes skin burns.
Serious eye damage/irritation: Causes serious eye damage.
Respiratory or skin sensitisation: No information available.

Chronic effects: No information available for the product.

Aspiration hazard: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Avoid contaminating waterways.

Persistence/degradability: COD (Chemical Oxygen Demand): 482 mg/g

Bioaccumulative potential: No information available.

Mobility in soil: No information available.

Aquatic toxicity: Very toxic to aquatic organisms.

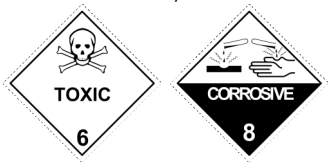
48hr LC50 (Daphnia magna): 0.16 mg/L
96hr LC50 (fathead minnow): 2.9 mg/L

13. DISPOSAL CONSIDERATIONS

Disposal methods:
Refer to Waste Management Authority. Dispose of contents and container in accordance with local, regional, national, international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.



UN No: 2927
Transport Hazard Class: 6.1 Toxic

Subrisk 1:	8 Corrosive
Packing Group:	II
Proper Shipping Name or Technical Name:	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (CONTAINS C12-C16 ALKYLDIMETHYLBENZYL AMMONIUM CHLORIDE AND DODECYLGUANIDINE HYDROCHLORIDE)
Hazchem or Emergency Action Code:	2XE

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:	2927
Transport Hazard Class:	6.1 Toxic
Subrisk 1:	8 Corrosive
Packing Group:	II
Proper Shipping Name or Technical Name:	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (CONTAINS C12-C16 ALKYLDIMETHYLBENZYL AMMONIUM CHLORIDE AND DODECYLGUANIDINE HYDROCHLORIDE)
IMDG EMS Fire:	F-A
IMDG EMS Spill:	S-B

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:	2927
Transport Hazard Class:	6.1 Toxic
Subrisk 1:	8 Corrosive
Packing Group:	II
Proper Shipping Name or Technical Name:	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (CONTAINS C12-C16 ALKYLDIMETHYLBENZYL AMMONIUM CHLORIDE AND DODECYLGUANIDINE HYDROCHLORIDE)

15. REGULATORY INFORMATION

Classification:
This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:
Flammable liquids - Category 4
Acute Oral Toxicity - Category 4
Skin Corrosion - Sub-category 1B
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The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:
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Hazard Statement(s):
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H330 Fatal if inhaled.
H400 Very toxic to aquatic life.

Poisons Schedule (SUSMP): S5 Caution.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS) or are exempt.

16. OTHER INFORMATION

Supplier Safety Data Sheet; 02/ 2016.

Reason(s) for Issue:
First Issue Primary SDS

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.