

Safety Data Sheet



Hazardous Substance, Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: **Spirax Sarco Delta 987**

Recommended use: Industrial cooling water biocide.

Supplier: DuluxGroup (PNG) Pte. Ltd.
Street Address: Air Corps Road
Lae Morobe Province
PNG
Telephone: 4723633

Emergency telephone number: Australia – +613 9663 2130

2. HAZARDS IDENTIFICATION

This material is hazardous according to criteria of Safe Work Australia.



Signal Word

Danger

Hazard Classification

Flammable Liquids – Category 4
Acute Toxicity – Oral – Category 4
Acute Toxicity – Dermal – Category 4
Acute Toxicity – Inhalation – Category 4
Skin Corrosion/Irritation – Category 1B
Serious Eye Damage/Irritation – Category 1
Sensitisation – Skin – Category 1A
Toxic to Reproduction – Category 1B

Hazard Statement(s)

H227 Combustible liquid
H302 Harmful if swallowed
H312 Harmful in contact with skin
H314 Causes severe skin burns and eye damage
H317 May cause an allergic skin reaction
H318 Causes serious eye damage
H332 Harmful if inhaled
H360 May damage fertility or the unborn child

Prevention Precautionary Statement(s)

P102 Keep out of reach of children
P103 Read label before use
P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood
P210 Keep away from all sources of ignition - No smoking

Product name: Spirax Sarco Delta 987

SDS No: DLXPNGEN001962

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Page: 1 of 8

Safety Data Sheet



P260	Do not breathe gas, mist, vapours or spray
P264	Wash hands, face and all exposed skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P271	Use only outdoors or in a well-ventilated area
P272	Contaminated work clothing should not be allowed out of the workplace
P280	Wear protective clothing, gloves, eye/face protection and suitable respirator as required

Response Precautionary Statement(s)

P101	If medical advice is needed, have product container or label at hand
P301+310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician
P301+312	IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell
P302+352	IF ON SKIN: Wash with soap and water
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P363	Wash contaminated clothing before reuse
P333+313	If skin irritation or a rash occurs: Get medical advice/attention
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P310	Immediately call a POISON CENTRE or doctor/physician
P370+378	In case of fire: Use water fog, foam or dry agents for extinction

Storage Precautionary Statement(s)

P405	Store locked up
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Disposal Precautionary Statement(s)

P501	Dispose of contents/container in accordance with local, regional, national and international regulations
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Poisons Schedule (Aust): Not applicable

DANGEROUS GOODS CLASSIFICATION

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

Class: 8 Corrosive

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO.	PROPORTION
2,2-Dibromo-3-nitrilopropionamide	10222-01-2	10 - 30%
Sodium bromide	7647-15-6	1 - 10%
Dibromoacetone nitrile	3252-43-5	1 - 10%
Ingredients determined to be non-hazardous	-	Balance
		100%

Safety Data Sheet



4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Remove victim from 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 breathing laboured and patient cyanotic (blue), ensure airways are clear and have a qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek immediate medical advice.

Skin contact: For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering, or irritation occurs seek medical assistance.

Eye contact: Immediately irrigate with copious quantities of water for 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre.

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

PPE for First Aiders: Wear overalls, face shield, elbow-length impervious gloves, splash apron and rubber boots. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

If risk of inhalation of exists, wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Notes to physician: Treat symptomatically. Can cause corneal burns.

5. FIRE-FIGHTING MEASURES

Hazchem Code: 2X

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

Specific hazards: Combustible material. Corrosive substance. Contact with acids liberates very toxic gas.

Fire fighting further advice: On burning may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

LARGE SPILLS

Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of 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. If contamination of sewers or waterways has occurred advise local emergency services.

Dangerous Goods – Initial Emergency Response Guide No: 37

7. HANDLING AND STORAGE

Handling: Avoid skin and eye contact and inhalation of vapour, mist or aerosols.

Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

This material is classified as a Dangerous Good Class 8 Corrosive as per the criteria of the Australian Dangerous Goods Code and must be stored in accordance with the relevant regulations.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

National occupational exposure limits: No value assigned for this specific material by Safe Work Australia or Department of Labour New Zealand.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering measures: Use only in well ventilated areas. Keep containers closed when not in use.

Personal protection equipment: D: OVERALLS, RUBBER BOOTS, FACE SHIELD, SAFETY SHOES, GLOVES, APRON.

Wear overalls, face shield, elbow-length impervious gloves, splash apron and rubber boots. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

If risk of inhalation of exists, wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Hygiene measures: Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid skin and eye contact and inhalation of vapour, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

Safety Data Sheet



9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: Clear, light-yellow liquid with an unpleasant odour.

Solubility:	Soluble in water.
Specific Gravity:	1.20 – 1.30
Relative Vapour Density (air=1):	>1
Vapour Pressure (20 °C):	N Av
Flash Point (°C):	80
Flammability Limits (%):	N Av
% Volatile by Volume:	N Av
Autoignition Temperature (°C):	N Av
Decomposition Point (°C):	N Av
Melting Point/Range (°C):	N Av
Boiling Point/Range (°C):	70
pH:	2.0
Viscosity:	N Av
Total VOC (g/Litre):	N Av

(Typical values only - consult specification sheet)

N Av = Not available

N App = Not applicable

10. STABILITY AND REACTIVITY

Reactivity: No reactivity hazards are known for the material.

Chemical stability: This material is thermally stable when stored and used as directed. However, the headspace of the drum may contain cyanogen bromide and dibromoacetonitrile.

Hazardous reactions: Contact with acids liberates very toxic gas.

Conditions to avoid: Elevated temperatures and sources of ignition.

Incompatible materials: Oxidising agents.

Hazardous decomposition products: Oxides of carbon and nitrogen, smoke and other toxic fumes.

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:

Acute Effects

Inhalation: Material may be an irritant to mucous membranes and respiratory tract.

Skin contact: Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns. A skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis.

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

Safety Data Sheet



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

Acute toxicity

Inhalation: This material has been classified as a Category 4 Hazard.
Acute toxicity estimate (based on ingredients): 10 - 20 mg/L

Skin contact: This material has been classified as a Category 4 Hazard.
Acute toxicity estimate (based on ingredients): 1,000 - 2,000 mg/Kg

Ingestion: This material has been classified as a Category 4 Hazard.
Acute toxicity estimate (based on ingredients): 300 - 2,000 mg/Kg

Corrosion/Irritancy: Eye: this material has been classified as a Category 1 Hazard (irreversible effects to eyes).

Skin: this material has been classified as a Category 1B Hazard (corrosive to skin).

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser.

Skin: this material has been classified as a Category 1A Hazard (skin sensitiser).

Aspiration hazard: This material has been classified as non-hazardous.

Specific target organ toxicity (single exposure): This material has been classified as non-hazardous.

Chronic Toxicity

Mutagenicity: This material has been classified as non-hazardous.

Carcinogenicity: This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation): This material has been classified as a Category 1B Hazard. Toxic to reproduction.

Specific target organ toxicity (repeat exposure): This material has been classified as non-hazardous.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard: This material has been classified as a Category Acute 1 Hazard.
Acute toxicity estimate (based on ingredients): <1 mg/L

Long-term aquatic hazard: This material has been classified as a Category Chronic 1 Hazard.
Acute toxicity estimate (based on ingredients): <1 mg/L

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Bioaccumulative potential: No information available.

Mobility: No information available.

Safety Data Sheet



13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

UN No: 3265
Dangerous Goods Class: 8 Corrosive
Packing Group: II
Hazchem Code: 2X
Emergency Response Guide No: 37

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CONTAINS 2,2-DIBROMO-3-NITRILOPROPIONAMIDE)

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1), dangerous when wet substances (Class 4.3), oxidising agents (Class 5.1), organic peroxides (Class 5.2), cyanides of Class 6, radioactive substances (Class 7) or food and food packaging in any quantity, however exemptions may apply. Note that concentrated strong acids are incompatible with concentrated strong alkalis.

MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

This material is classified as a Marine Pollutant (P) according to the International Maritime Dangerous Goods Code.

UN No: 3265
Dangerous Goods Class: 8 Corrosive
Packing Group: II

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CONTAINS 2,2-DIBROMO-3-NITRILOPROPIONAMIDE)

AIR TRANSPORT

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

UN No: 3265
Dangerous Goods Class: 8 Corrosive
Packing Group: II

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CONTAINS 2,2-DIBROMO-3-NITRILOPROPIONAMIDE)

Safety Data Sheet



15. REGULATORY INFORMATION

This material is not subject to the following international agreements:

Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)

This material is subject to the following international agreements:

Basel Convention (Hazardous Waste)

- Wastes from the production, formulation and use of biocides and phytopharmaceuticals

International Convention for the Prevention of Pollution from Ships (MARPOL)

- Annex III - Harmful Substances carried in Packaged Form

This material/constituent(s) is covered by the following requirements:

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

16. OTHER INFORMATION

Literary reference

This Safety Data Sheet has been prepared by Chemical Data Services Pty Ltd (chemdata.com.au) on behalf of its client.

Reason(s) For Issue: First Issue

Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

This SDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since DuluxGroup (Australia) Pty Ltd and DuluxGroup (New Zealand) Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this SDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.