

Safety Data Sheet



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **GLUTARALDEHYDE 50% SOLUTION**

Recommended Use of the Chemical and Restrictions on Use For biocidal applications.
For industrial use only.

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.

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: DANGER

Subclasses:

- Subclass 6.1 Category B - Substances which are acutely toxic.
- Subclass 6.5 Category A - Substances that are respiratory sensitisers.
- Subclass 6.5 Category B - Substances that are contact sensitisers.
- Subclass 6.9 Category B - Substances that are harmful to human target organs or systems.
- Subclass 8.2 Category B - Substances that are corrosive to dermal tissue.
- Subclass 8.3 Category A - Substances that are corrosive to ocular tissue.
- Subclass 9.1 Category A - Substances that are very ecotoxic in the aquatic environment.
- Subclass 9.2 Category A - Substances that are very ecotoxic in the soil environment.
- Subclass 9.3 Category A - Substances that are very ecotoxic to terrestrial vertebrates.

The Health and Safety at Work (Hazardous Substances) Tracking Regulations 2017 are applicable to this material.

Approval Number: HSR006394



Hazard Statement(s):

- H300+H330 Fatal if swallowed or if inhaled.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H421 Very toxic to the soil environment.
- H431 Very toxic to terrestrial vertebrates.

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Substance No: 00000050848

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Precautionary Statement(s):

Prevention:

P102 Keep out of reach of children.

P260 Do not breathe dust/fume/gas/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.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P284 Wear respiratory protection.

P273 Avoid release to the environment.

Response:

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P363 Wash contaminated clothing before re-use.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P305+P351+P338 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 CENTER or doctor/physician.

P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P320 Specific treatment is urgent (see First Aid Measures on the Safety Data Sheet).

P310 Immediately call a POISON CENTER or doctor/physician.

P314 Get medical advice/attention if you feel unwell.

P391 Collect spillage.

Storage:

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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.

Other Hazards:

Corrosive to the respiratory tract.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Glutaraldehyde	111-30-8	50%	H301 H314 H317 H330 H334 H335 H411
Water	7732-18-5	50%	-

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 spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor.

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. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically. Can cause corneal burns. Delayed pulmonary oedema may result. Glutaraldehyde may transiently worsen reversible airways obstruction including asthma or reactive airways disease. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Probable mucosal damage may contraindicate the use of gastric lavage. No known specific antidote. Following severe exposure, the patient should be kept under medical supervision for at least 48 hours.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 2X

Specific hazards arising from the chemical:

Non-combustible material. Corrosive substance. Toxic substance. Environmentally hazardous.

Special protective equipment and precautions for fire-fighters:

Decomposes on heating emitting toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Isolate spill or leak area immediately. 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. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Deactivate with sodium bisulfite (2-3 parts by weight per part of active substance glutaraldehyde). 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 vapour, mists and aerosols. Avoid aerosol formation. Keep out of reach of children.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated place. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Do not store in aluminium, carbon steel, copper, mild steel, iron. Shelf life: Use within 18 months. 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):

Glutaraldehyde: WES-STEL 0.05 ppm, sen

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

WES - STEL (Workplace Exposure Standard - Short Term Exposure Limits) - The 15 minute average exposure standard. Applies to any 15 minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both short-term and eight-hour, time-weighted average exposures should be determined.

'Sen' Notice - sensitiser. A substance that can 'sensitise' the respiratory system, including a state of hypersensitivity to it, so that on subsequent exposures, an allergic reaction can occur (which would not develop in non-sensitised individuals). It is uncommon to become sensitised to a compound after just a single reaction to it.

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.

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Wear overalls, chemical goggles, full face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. Use with adequate ventilation. If determined by a risk assessment an inhalation risk exists, wear an air-supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Clear Liquid
Colour:	Colourless
Odour:	Fruity
Odour Threshold:	<1 ppb (literature)
Solubility:	Miscible in water.
Specific Gravity:	1.129
Relative Vapour Density (air=1):	1.1 (literature)
Vapour Pressure (20 °C):	0.3 mmHg
Flash Point (°C):	Not applicable
Flammability Limits (%):	Not applicable
Autoignition Temperature (°C):	Not applicable
Boiling Point/Range (°C):	100.7
pH:	3.1-4.5
Viscosity:	20.2 mm ² /s @20°C (literature)
Partition Coefficient:	log Pow = -0.333
Freezing Point/Range (°C):	-18

10. STABILITY AND REACTIVITY

Reactivity:	No hazardous reactions if stored and handled as prescribed/indicated.
Chemical stability:	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous reactions:	Reacts exothermically with strong alkalis .
Conditions to avoid:	Avoid temperatures above 50 °C.
Incompatible materials:	Incompatible with amines, ammonia, strong acids, strong alkalis, strong oxidising agents, aluminium, carbon steel, copper, iron, mild steel.
Hazardous decomposition products:	Oxides of carbon.

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:

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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. A skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis.

Inhalation: Breathing in mists or aerosols will produce respiratory irritation. A respiratory sensitiser. Can cause possible allergic reactions, producing asthma-like symptoms.

Acute toxicity:

Oral LD50 (rat): 200 mg/kg
Dermal LD50 (rabbit): >2000 mg/kg
Inhalation LC50 (rat): 0.28-0.35 mg/L/4hr (dust/mist)

Skin corrosion/irritation: Corrosive (rabbit).
Serious eye damage/irritation: Corrosive (rabbit).
Respiratory or skin sensitisation: A skin sensitiser (guinea pig).

Chronic effects: The substance was mutagenic in various cell culture test systems; however, these results could not be confirmed in tests with mammals. In long-term animal studies in which the substance was given in the drinking water in high concentrations, a carcinogenic effect was not observed. No teratogenic effects were observed in animal studies.

Reproductive toxicity: No evidence of impaired fertility was found in animal studies.
Specific Target Organ Toxicity (STOT) - single exposure: May cause respiratory irritation.
Specific Target Organ Toxicity (STOT) - repeated exposure: None known.
Aspiration hazard: Not classified.

12. ECOLOGICAL INFORMATION

Ecotoxicity Avoid contaminating waterways.

Persistence/degradability: The material is readily biodegradable.

Bioaccumulative potential: Bioconcentration Factor (BCF): <100. This material shows a low bioaccumulation potential.

Mobility in soil: High mobility in soil.

Aquatic toxicity: Very toxic to aquatic organisms.

48hr LC50 (Daphnia magna): 0.69 mg/L
96hr LC50 (fathead minnow): 10.8 mg/L

13. DISPOSAL CONSIDERATIONS

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Disposal methods:

Refer to local government authority for disposal recommendations. Dispose of contents/container in accordance with local/regional/national/international regulations. Normally suitable for incineration by an approved agent.

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: 2922
Transport Hazard Class: 8 Corrosive
Subrisk 1: 6.1 Toxic
Packing Group: II
Proper Shipping Name or Technical Name: CORROSIVE LIQUID, TOXIC, N.O.S. (CONTAINS GLUTARALDEHYDE)
Hazchem or Emergency Action Code: 2X

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: 2922
Transport Hazard Class: 8 Corrosive
Subrisk 1: 6.1 Toxic
Packing Group: II
Proper Shipping Name or Technical Name: CORROSIVE LIQUID, TOXIC, N.O.S. (CONTAINS GLUTARALDEHYDE)
IMDG EMS Fire: F-A
IMDG EMS Spill: S-B

Marine Pollutant: Yes

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: 2922
Transport Hazard Class: 8 Corrosive
Subrisk 1: 6.1 Toxic
Packing Group: II
Proper Shipping Name or Technical Name: CORROSIVE LIQUID, TOXIC, N.O.S. (CONTAINS GLUTARALDEHYDE)

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.

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Subclasses:

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- Subclass 6.9 Category B - Substances that are harmful to human target organs or systems.
- Subclass 8.2 Category B - Substances that are corrosive to dermal tissue.
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- Subclass 9.2 Category A - Substances that are very ecotoxic in the soil environment.
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- H431 Very toxic to terrestrial vertebrates.

16. OTHER INFORMATION

Supplier Safety Data Sheet; 03/ 2015.

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

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.