

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: CHOLINE CHLORIDE

2-Hydroxyethyl-N,N,N-trimethylammonium chloride; (2-Hydroxyethyl)trimethylammonium Other name(s):

chloride; (beta-Hydroxyethyl)trimethylammonium chloride;

2-Hydroxy-N,N,N-trimethylethanaminium chloride; Ammonium, (2-hydroxyethyl)trimethyl-,

chloride; Choline hydrochloride.

Recommended Use of the Chemical Nutritional additive in feed preparations. Should not be used for cosmetics. and Restrictions on Use

Ixom Operations Pty Ltd (Incorporated in Australia) Supplier:

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

Not classified as a Dangerous Good under 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: WARNING

Subclasses:

Subclass 6.1 Category E - Substances which are acutely toxic.

Subclass 6.3 Category B - Substances that are mildly irritating to the skin.

Subclass 6.4 Category A - Substances that are irritating to the eye.

Approval Number: HSR003777



Hazard Statement(s):

H303 May be harmful if swallowed. H316 Causes mild skin irritation. H319 Causes serious eye irritation.

Precautionary Statement(s):

Prevention:

P264 Wash hands thoroughly after handling.

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

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Response:

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

P332+P313 If skin irritation occurs: Get medical advice/attention.

P321 Specific treatment (see First Aid Measures on the Safety Data Sheet).

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.

Storage:

No storage statements.

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
Ethanaminium, 2-hydroxy-N,N,N-trimethyl-, chloride	67-48-1	>=97%	H315, H319, H335
Amorphous synthetic silica gel	112926-00-8	0.5-3%	-

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. Seek medical advice if effects persist.

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:

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 medical advice.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

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

Unsuitable Extinguishing Media:

None known.

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Specific hazards arising from the chemical:

Combustible solid. On burning will emit toxic fumes, including those of oxides of carbon, oxides of nitrogen, hydrochloric acid and trimethylamine.

Special protective equipment and precautions for fire-fighters:

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:

Clear area of all unprotected personnel. Shut off all possible sources of ignition. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up: Wear protective equipment to prevent skin and eye contact and breathing in dust. Work up wind or increase ventilation. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. 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. In common with many organic chemicals, may form flammable dust clouds in air. For precautions necessary refer to Safety Data Sheet "Dust Explosion Hazards". Take precautionary measures against static discharges. When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated place. Store away from sources of heat or ignition. Store away from incompatible materials described in Section 10. Protect from moisture. Keep containers closed when not in use - check regularly for spills.

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 particulates:

Particulates not otherwise classified: 8hr WES-TWA 10 mg/m³ (inhalable dust) or 3 mg/m³ (respirable dust)

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.

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.

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Appropriate engineering controls:

Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Avoid generating and breathing in dusts. 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, DUST MASK.









Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator 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: Crystalline Powder

Colour: White

Odour: Slight Amine Odour Threshold: Not available

Solubility: Soluble in water. Soluble in alcohol.

Specific Gravity: 1.1

Relative Vapour Density (air=1): Not available Vapour Pressure (20 °C): Not available Flash Point (°C): Not applicable Flammability Limits (%): Not available Autoignition Temperature (°C): Not available

Melting Point/Range (°C): 247

Decomposition Point (°C): Not available

pH: 4.0 - 7.0 (10% aqueous solution @ 20°C)

10. STABILITY AND REACTIVITY

Reactivity: Hygroscopic: absorbs moisture or water from surrounding air.

Chemical stability: Stable under normal conditions.

Possibility of hazardous

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reactions:

Dust explosion hazard.

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Avoid exposure to heat, sources of ignition, and open flame. Avoid dust Conditions to avoid:

generation. Avoid exposure to moisture.

Incompatible with oxidising agents, strong acids, strong bases. Incompatible materials:

Hazardous decomposition

products:

Trimethylamine. Hydrochloric acid. Oxides of nitrogen. 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:

Ingestion: Swallowing may result in nausea, vomiting, diarrhoea and abdominal pain.

Eye contact: An eye irritant.

Skin contact: Contact with skin will result in mild irritation.

Inhalation: Material is irritant to the mucous membranes of the respiratory tract (airways).

Acute toxicity:

Oral LD50 (rat): 3,400 mg/kg

Skin corrosion/irritation: Irritant. Serious eye damage/irritation: Irritant.

Respiratory or skin

sensitisation:

No information available.

Chronic effects:

Mutagenicity: No information available. Carcinogenicity: No information available. Reproductive toxicity: No information available. **Specific Target Organ Toxicity** May cause respiratory irritation.

(STOT) - single exposure:

Specific Target Organ Toxicity

No information available.

(STOT) - repeated exposure:

Aspiration hazard: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Avoid contaminating waterways.

Persistence/degradability: No information available.

Bioaccumulative potential: No information available.

Mobility in soil: No information available.

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. Neutralise with calcium hydroxide or sodium carbonate. Normally suitable for incineration by an approved agent.

14. TRANSPORT INFORMATION

Road and Rail Transport

Not classified as a Dangerous Good under NZS 5433:2012 Transport of Dangerous Goods on Land.

Marine Transport

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

Air Transport

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

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:

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16. OTHER INFORMATION

Supplier Safety Data Sheet; 05/2017.

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

Reason(s) for Issue:

First Issue Primary SDS

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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.

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