

Safety Data Sheet **CETYL TRIMETHYL AMMONIUM BROMIDE**

SDS no. C1NMTVX5 • Version 1.0 • Date of issue: 2023-07-06

SECTION 1: Identification

GHS Product identifier

Product name CETYL TRIMETHYL AMMONIUM BROMIDE

Other means of identification

CETYL TRIMETHYL AMMONIUM BROMIDE LR Cetramide

Cetrimidium

CTAB

Cetrimonium bromide

Cetab

Hexadecyl trimethyl ammonium bromide

Recommended use of the chemical and restrictions on use

Disinfectant, germicide, surface-active agent and laboratory reagent.

Supplier's details

Name ChemSupply Australia Pty Ltd
Address 38-50 Bedford Street
5013 Gillman South Australia
Australia

Telephone 08 8440 2000
email www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

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- Acute toxicity, dermal, Cat. 4
- Acute toxicity, oral, Cat. 4
- Serious eye damage/eye irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1B
- Hazardous to the aquatic environment, short-term (acute), Cat. 1

GHS label elements, including precautionary statements

Pictograms



Signal word

Danger

Hazard statement(s)

H302

Harmful if swallowed

H312

Harmful in contact with skin

H314

Causes severe skin burns and eye damage

H400

Very toxic to aquatic life

Precautionary statement(s)

P260

Do not breathe dust/fume/gas/mist/vapors/spray.

P273

Avoid release to the environment.

P280

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

P301+P312

IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell,

P301+P330+P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304+P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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/doctor/physician

P362+P364

Take off contaminated clothing and wash it before reuse.

P391

Collect spillage.

P405

Store locked up.

P501

Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 364.46

Components

Component	CAS no.	Concentration
HEXADECYLTRIMETHYLAMMONIUM BROMIDE (EC no.: 200-311-3)	57-09-0	100 % (weight)
CLASSIFICATIONS: Acute toxicity, dermal, Cat. 4; Acute toxicity, oral, Cat. 4; Skin corrosion/irritation, Cat. 1B; Hazardous to the aquatic environment, short-term (acute), Cat. 1. HAZARDS: H302 - Harmful if swallowed; H312 - Harmful in contact with skin; H314 - Causes severe skin burns and eye damage; H400 - Very toxic to aquatic life.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First Aid Facilities: Maintain eyewash fountain and drench facilities in work area.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Consult a physician.
In case of skin contact	Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek immediate medical advice /attention depending on the severity.
In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically based on judgement of doctor and individual reactions of the patient.

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Specific Methods: Small fire: Use dry chemical, CO₂, water spray or foam.

Large fire: Use water spray, fog or foam.

If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out.

Specific hazards arising from the chemical

Hazards from Combustion Products: Carbon monoxide, carbon dioxide, nitrogen oxides and hydrogen bromide.

May burn but do not ignite readily. Containers may explode when heated. Runoff may pollute waterways. Fire or heat may produce irritating, poisonous and/or corrosive gases.

Special protective actions for fire-fighters

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

See Section 8, Exposure Controls/Personal Protection.

Environmental precautions

Do not allow product to reach ground water or water ways.

Methods and materials for containment and cleaning up

Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations.

Do not allow product to reach ground water or water ways.

SECTION 7: Handling and storage

Precautions for safe handling

Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Wash hands and face thoroughly after working with material. Contaminated clothing should be removed and washed before reuse. Keep container tightly closed when not in use.

Conditions for safe storage, including any incompatibilities

Do not store in unsuitable, unlabelled or incorrectly labelled containers. Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a dry, well-ventilated place away from direct sunlight and other sources of heat or ignition.

Store at room temperature (15 to 25 °C recommended).

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Hand protection should comply with AS 2161 Industrial Safety Gloves and Mittens (Excluding Electrical and Medical Gloves). Rubber or plastic recommended.

Body protection

Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210 Safety Footwear.

Body Protection: Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state

Solid

Appearance

White to creamy white powder.

Color

No data available.

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Odor	Weak to odourless.
Odor threshold	No data available.
Melting point/freezing point	230°C
Boiling point or initial boiling point and boiling range	Not determined.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	244°C - closed cup
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	5 - 8 (20°C)
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Soluble - 36g/l at 20°C Solubility in Organic Solvents: Soluble in alcohol and chloroform.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	No data available.
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

No data available.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous Polymerization: Will not occur.

Conditions to avoid

Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials

Oxidising agents.

Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

Information on toxicological effects

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Acute toxicity

Acute Toxicity - Oral: Oral LD50 (rat): 410 mg/kg - RTECS

Ingestion: Harmful if swallowed. May cause nausea, vomiting, relaxation of muscles with convulsions, respiration difficulties or failure due to paralysis of respiratory muscles. Hypertension and coma may also occur.

Inhalation: Irritating to respiratory system.

Skin corrosion/irritation

Causes severe skin burns. Harmful in contact with skin. Prolonged skin contact may give rise to hypersensitivity to the material resulting in abnormally dry skin.

Serious eye damage/irritation

Causes severe eye damage.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No evidence of mutagenic properties.

Carcinogenicity

Not listed on IARC - International Agency for Research on Cancer database.

Reproductive toxicity

No data available.

Specific target organ toxicity (STOT) - single exposure

No data available.

Specific target organ toxicity (STOT) - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

HEXADECYLTRIMETHYLAMMONIUM BROMIDE: guinea pig LD50 subcutaneous 100mg/kg (100mg/kg) "Pesticide Index," Frear, E.H., ed., State College, PA, College Science Pub., 1969Vol. 5, Pg. 40, 1976.

mouse LD50 intraperitoneal 106mg/kg (106mg/kg) BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

LUNGS, THORAX, OR RESPIRATION: RESPIRATORY DEPRESSION Food and Cosmetics Toxicology. Vol. 13, Pg. 331, 1975.

[Link to PubMed](#)

mouse LD50 intravenous 32mg/kg (32mg/kg) LUNGS, THORAX, OR RESPIRATION: OTHER CHANGES Acta Pharmacologica et Toxicologica. Vol. 47, Pg. 17, 1980.

[Link to PubMed](#)

rabbit LD50 intraperitoneal 125mg/kg (125mg/kg) Pesticide Chemicals Official Compendium, Association of the American Pesticide Control Officials, Inc., 1966. Vol. -, Pg. 210, 1966.

rabbit LD50 subcutaneous 125mg/kg (125mg/kg) Pesticide Chemicals Official Compendium, Association of the American Pesticide Control Officials, Inc., 1966. Vol. -, Pg. 210, 1966.

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rat LD50 intravenous 44mg/kg (44mg/kg) LUNGS, THORAX, OR RESPIRATION: OTHER CHANGES Acta Pharmacologica et Toxicologica. Vol. 47, Pg. 17, 1980.

[Link to PubMed](#)

rat LD50 oral 410mg/kg (410mg/kg) Yakkyoku. Pharmacy. Vol. 31, Pg. 471, 1980.

SECTION 12: Ecological information

Toxicity

Very toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

Do not allow product to reach ground water, water course or sewage system.

[8X] Acute Toxicity - Fish: semi-static test LC50 - Brachydanio rerio (zebra fish) - 0.2mg/l - 96 h.

[8Y] Acute Toxicity - Daphnia: Immobilization EC50 - Daphnia Magne (Water flea) - 0.03 mg/l - 48 h.

Persistence and degradability

Aerobic chemical oxygen demand - exposure time 11 days result: 100% - readily biodegradable.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)

UN Number: 3077

Class: 9

Packing Group: III

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains CETYL TRIMETHYL AMMONIUM BROMIDE)

Hazchem emergency action code (EAC)

2Z

IMDG

UN Number: 3077

Class: 9

Packing Group: III

EMS Number:

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains CETYL TRIMETHYL AMMONIUM BROMIDE)

IATA

UN Number: 3077

Class: 9

Packing Group: III

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains CETYL TRIMETHYL AMMONIUM BROMIDE)

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP

Poison Schedule: S6

SECTION 16: Other information

Further information/disclaimer

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

Preparation information

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)