SAFETY DATA SHEET

SDS-ASA-3017 | Rev 01 | Issue Date: 18-Sep-2024
www.ausamics.com.au

Oxytetracycline Dihydrate, BP

Prepared in accordance with Safe Work Australia's Globally Harmonized System (GHS 7th revision) as adopted under the WHS Regulations, and ISO 11014 / ANZ 16-section SDS format.

SECTION 1: IDENTIFICATION

Product Name	Oxytetracycline Dihydrate, BP
Catalogue Number	ASA-3017
Synonyms	Terramycin dihydrate; 5-Hydroxytetracycline dihydrate
CAS Number	6153-64-6 (dihydrate) | 79-57-2 (anhydrous)
Recommended Use	Research and laboratory use only (selective agent in microbiological media; antibiotic-resistance and genetic research). Not for human, veterinary, food, feed, or pharmaceutical use.
Manufacturer / Supplier	AuSaMicS Pty Ltd, 36/25 Trafalgar Road, Epping, VIC 3076, Australia
ABN	56 676 640 467
Telephone	+61 412 520 598
Email	support@ausamics.com
Emergency Telephone (Australia)	Poisons Information Centre — 13 11 26 (24 hours, Australia-wide)

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification

Hazard Class	Category
Acute toxicity (oral)	Category 4 — H302
Skin sensitisation	Category 1 — H317
Reproductive toxicity	Category 1A — H360D
Hazardous to the aquatic environment — acute	Category 1 — H400
Hazardous to the aquatic environment — chronic	Category 1 — H410

Label Elements



Signal Word: Danger

Hazard Statements: H302 – Harmful if swallowed. H317 – May cause an allergic skin reaction. H360D – May damage the unborn child. H400 – Very toxic to aquatic life. H410 – Very toxic to aquatic life with long lasting effects.

Precautionary Statements — Prevention: P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing dust. P264 Wash hands thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response: P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P308+P313 IF exposed or concerned: Get medical advice/attention. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse. P391 Collect spillage.

Storage: P405 Store locked up. Disposal: P501 Dispose of contents/container in accordance with local, state and federal regulations.

Other Hazards

No data available on PBT/vPvB status. Repeated antibiotic exposure of laboratory personnel may contribute to sensitisation or to selection of antibiotic-resistant microorganisms in the workplace; good microbiological and occupational hygiene practice should be maintained.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Concentration
Oxytetracycline dihydrate	6153-64-6	100 (assay 95.0–102.0%, anhydrous basis; water 6.0–9.0%)

Substance. The water of crystallisation is part of the dihydrate substance and is not a separate ingredient. No hazardous impurities or additives are present above disclosure limits.

SECTION 4: FIRST AID MEASURES

Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist.
Skin Contact	Remove contaminated clothing. Wash skin immediately with plenty of soap and water. Seek medical attention if irritation, rash or allergic reaction develops.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing and seek medical attention if irritation persists.

Ingestion	Rinse mouth with water. Do not induce vomiting. Seek medical advice/attention immediately; call the Poisons Information Centre (13 11 26) or a doctor.
Most Important Symptoms/Effects	Skin sensitisation reactions; gastrointestinal discomfort if swallowed. Pregnant individuals should avoid exposure (reproductive toxicant).
Notes to Physician	Treat symptomatically. Tetracycline-class hypersensitivity should be considered in exposed individuals with a prior sensitisation history.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Water spray, carbon dioxide (CO2), dry chemical powder, alcohol-resistant foam
Unsuitable Extinguishing Media	None known; avoid high-pressure water jet which may disperse dust
Specific Hazards	Combustible organic solid. Thermal decomposition may release oxides of carbon and nitrogen
Special Protective Equipment	Wear self-contained breathing apparatus (SCBA) and full protective clothing in a significant fire

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid raising or inhaling dust. Wear appropriate PPE (Section 8). Ensure adequate ventilation. Restrict access until clean-up is complete
Environmental Precautions	Very toxic to aquatic life. Prevent entry into drains, waterways or soil. Contain spill and notify environmental authorities if release occurs to the environment
Containment & Clean-Up	Collect spilled material using dry methods (avoid generating dust); sweep or vacuum into a suitable closed, labelled container for disposal. Avoid dry sweeping that generates airborne dust; use a HEPA vacuum where available. Wash residual area with water only after solid material is removed

SECTION 7: HANDLING AND STORAGE

Handling	Handle in a fume hood or with local exhaust ventilation to minimise dust/aerosol generation. Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling. Do not eat, drink or smoke while handling

Storage	Store at 2–8 °C, protected from light, in tightly closed original packaging. Store away from incompatible materials and out of reach of unauthorised personnel. Keep container dry (hygroscopic)
Incompatible Materials	Strong oxidising agents; strong acids and alkalis (outside recommended pH handling ranges); divalent/trivalent metal ions (chelation reduces potency)

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits	No specific Safe Work Australia Workplace Exposure Standard (WES) established for oxytetracycline. Apply the default WES for dust not otherwise classified where relevant, and minimise exposure using the hierarchy of controls
Engineering Controls	Use in a certified fume hood or biosafety cabinet where dust/aerosol may form; ensure adequate general ventilation
Eye/Face Protection	Safety glasses with side shields or chemical goggles
Skin Protection	Nitrile gloves; laboratory coat; closed footwear
Respiratory Protection	Not normally required with adequate ventilation; use a P2/N95 (or higher) particulate respirator if dust generation is significant
General Hygiene	Wash hands and exposed skin before breaks and at the end of work. Do not eat, drink or smoke in the work area

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Appearance	Yellow crystalline powder
Odour	Odourless
pH (1% suspension)	4.5 – 7.5
Melting/Decomposition Point	Decomposes ~180–185 °C (does not melt sharply)
Solubility in Water	Very slightly soluble; soluble in dilute acids and alkalis
Molecular Weight	496.46 g/mol ($C_{22}H_{24}N_2O_9 \cdot 2H_2O$)
Hygroscopicity	Hygroscopic
Flammability	Not classified as flammable (combustible organic solid)

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions (2–8 °C, dark, dry, tightly closed)
Conditions to Avoid	Heat, prolonged light exposure, moisture ingress
Incompatible Materials	Strong oxidisers, strong acids/alkalis, polyvalent metal ions
Hazardous Decomposition Products	Oxides of carbon and nitrogen under thermal decomposition or combustion
Possibility of Hazardous Reactions	None known under normal use conditions

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	Harmful if swallowed (H302); classified Acute Tox. Category 4
Skin Corrosion/Irritation	Not classified based on available data; good hygiene practice recommended
Serious Eye Damage/Irritation	Not classified based on available data; direct contact may cause transient irritation
Respiratory or Skin Sensitisation	May cause an allergic skin reaction (H317); Category 1
Germ Cell Mutagenicity	Not classified
Carcinogenicity	Not classified as a carcinogen by IARC, NTP, ACGIH or OSHA
Reproductive Toxicity	May damage the unborn child (H360D); Category 1A. Tetracyclines cross the placenta and can affect fetal bone/tooth development
STOT — Single/Repeated Exposure	Not classified; prolonged/repeated exposure should be minimised as good practice
Aspiration Hazard	Not classified

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity	Very toxic to aquatic life (H400); very toxic to aquatic life with long lasting effects (H410). Tetracyclines are known to inhibit susceptible aquatic bacteria and algae at low concentrations
Persistence & Degradability	Expected to be moderately persistent; subject to photodegradation and hydrolysis under environmental conditions
Bioaccumulative Potential	Low bioaccumulation potential expected (log Kow low; ionisable molecule)
Mobility in Soil	Moderately mobile; adsorbs to organic matter and clay minerals

Other Adverse Effects	May contribute to selection of antibiotic-resistant environmental bacteria if released in quantity; avoid environmental release

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of surplus material, contaminated packaging and clean-up residues as pharmaceutical/antibiotic waste through a licensed waste contractor, in accordance with the Australian National Environment Protection (Movement of Controlled Waste) Measure and applicable state/territory EPA requirements. Do not discharge to sewer, waterways or general (municipal) waste due to aquatic toxicity. Decontaminate empty containers before disposal or recycling where permitted by local regulation.

SECTION 14: TRANSPORT INFORMATION

UN Number	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Oxytetracycline)
Transport Hazard Class(es)	9
Packing Group	III
Environmental Hazards	Environmentally hazardous substance / marine pollutant: Yes. Hazchem code: 2Z
Special Precautions	Small-quantity exceptions: packages of 5 kg net or less per single or inner packaging are not subject to the IATA DGR (Special Provision A197) or other IMDG Code provisions (2.10.2.7); by road/rail, packagings of 500 kg or less are not subject to the ADG Code (Special Provision AU01). Transport at 2–8 °C where practicable to preserve product stability (not a regulatory requirement).

SECTION 15: REGULATORY INFORMATION

Australian WHS Classification	Classified as hazardous chemical under the WHS Regulations (GHS 7); see Section 2
AIIC / AICIS	Introduction for research and laboratory use is subject to AICIS requirements. Contact AuSaMicS for introduction status.
Poisons Standard (SUSMP)	Oxytetracycline is listed in Schedule 4 (Prescription Only Medicine) of the Poisons Standard when supplied for therapeutic use. This product is supplied strictly for research and laboratory use, not for therapeutic supply.
Other Regulations	Supplied under AuSaMicS Pty Ltd's standard Terms of Sale for research use only — not for human or veterinary therapeutic use, food, feed or agricultural application

SECTION 16: OTHER INFORMATION

Revision	01
Issue Date	18 September 2024
Prepared By	AuSaMicS Pty Ltd — Technical/QA Department
Key to Abbreviations	GHS = Globally Harmonized System; WHS = Work Health and Safety; PBT = Persistent, Bioaccumulative, Toxic; vPvB = very Persistent, very Bioaccumulative; STOT = Specific Target Organ Toxicity; WES = Workplace Exposure Standard
Key Literature Sources	Safe Work Australia Hazardous Chemical Information System; British Pharmacopoeia monograph; published manufacturer SDSs for oxytetracycline-containing veterinary formulations (used for hazard-classification cross-reference); Chopra & Roberts (2001) Microbiol. Mol. Biol. Rev.

This document is issued by AuSaMicS Pty Ltd (ABN 56 676 640 467) for research and laboratory use only. The information provided is believed to be accurate based on current knowledge and is supplied in good faith; however, AuSaMicS Pty Ltd makes no warranty, express or implied, regarding completeness or suitability for any particular application. This product is not intended for use in food, drugs, cosmetics, household, or other unauthorised applications. It is the responsibility of the user to determine the suitability of this product for their specific use and to comply with all applicable laws and regulations, including safe handling, storage, and disposal requirements. AuSaMicS Pty Ltd accepts no liability for any loss or damage arising from the use or misuse of this product or the information contained in this document.

This SDS supplements but does not replace product-specific label information. Users must conduct their own risk assessment for the specific task and workplace before use.