

Safety Data Sheet

Tris Buffer (Tris(hydroxymethyl)aminomethane) | Cat. No. ASC-8019 | GHS 7th Edition / WHS Regulations 2023 (Australia)

Section 1 — Identification

Product Name	Tris(hydroxymethyl)aminomethane (Tris Buffer)
Catalogue No.	ASC-8019
CAS Number	77-86-1
Chemical Formula	C ₄ H ₁₁ NO ₃
Synonyms	Trizma base; Tris base; THAM; Trometamol; Tromethamine
Recommended Use	High-purity biological buffer for molecular biology and biochemistry research
Restrictions on Use	For laboratory research use only — not for diagnostic or therapeutic use
Supplier	AuSaMicS Pty Ltd ABN 56 676 640 467
Address	36/25 Trafalgar Road, Epping, VIC 3076, Australia
Telephone	+61 412 520 598
Email	support@ausamics.com
Emergency Telephone	Poisons Information Centre: 13 11 26 (24 hours, Australia-wide)

Section 2 — Hazard(s) Identification

Classified as a hazardous chemical under the Australian WHS (Hazardous Chemicals) Regulations 2023 and GHS 7th Edition. This substance is an irritant to eyes, skin, and the respiratory system.



GHS Classification	Skin Irritation Category 2; Eye Irritation Category 2; Specific Target Organ Toxicity — Single Exposure (Respiratory Irritation) Category 3
Signal Word	Warning
Hazard Statements	H315 — Causes skin irritation. H319 — Causes serious eye irritation. H335 — May cause respiratory irritation.
Precautionary Statements — Prevention	P261 — Avoid breathing dust. P271 — Use only outdoors or in a well-ventilated area. P280 — Wear protective gloves/protective clothing/eye protection/face protection. P264 — Wash exposed skin thoroughly after handling.



Precautionary Statements — Response

P305+P351+P338 — IF IN EYES: rinse cautiously with water for several minutes; remove contact lenses if present and easy to do; continue rinsing. P302+P352 — IF ON SKIN: wash with plenty of soap and water. P304+P340 — IF INHALED: remove to fresh air and keep at rest in a position comfortable for breathing. P332+P313 / P337+P313 — If skin or eye irritation persists, get medical advice.

Section 3 — Composition / Information on Ingredients

Component	% w/w	CAS No.	Classification
Tris(hydroxymethyl)aminomethane	≥ 99%	77-86-1	Skin Irrit. 2, Eye Irrit. 2, STOT SE 3 (H315, H319, H335)

Section 4 — First-Aid Measures

Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if irritation persists.
Skin Contact	Wash with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation persists.
Inhalation	Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if symptoms persist.
Ingestion	Rinse mouth with water. Do not induce vomiting. Seek medical advice if a large quantity is swallowed or symptoms occur.

Section 5 — Fire-Fighting Measures

Suitable Extinguishing Media	Water spray, carbon dioxide, dry chemical powder, foam
Specific Hazards	Combustible organic powder. No unusual fire or explosion hazards known under normal handling.

Section 6 — Accidental Release Measures

Personal Precautions	Avoid raising dust. Use PPE as per Section 8. Ensure adequate ventilation.
Environmental Precautions	Prevent entry into drains, watercourses, or soil



Containment & Clean-Up

Sweep or vacuum into a suitable, labelled container for disposal. Avoid dry sweeping that generates dust.

Section 7 — Handling and Storage

Handling Precautions

Avoid contact with eyes and skin. Avoid generating and breathing dust. Handle in a well-ventilated area.

Storage Conditions

Store in a cool, dry place, tightly sealed, protected from moisture

Incompatibilities

None known under normal storage conditions

Section 8 — Exposure Controls / Personal Protection

Engineering Controls

Local exhaust ventilation or fume hood when weighing bulk powder

Eye/Face Protection

Safety glasses or goggles

Hand Protection

Nitrile gloves

Body Protection

Laboratory coat

Respiratory Protection

P1/P2 particulate respirator when weighing or handling bulk powder

Section 9 — Physical and Chemical Properties

Appearance

White crystalline powder

Molecular Weight

121.14 g/mol

Melting Point

171–176°C

Boiling Point

219–220°C

Solubility in Water

Freely soluble (~50 g/100 mL at 25°C)

pKa

8.06–8.1 at 20–25°C

Section 10 — Stability and Reactivity

Chemical Stability

Stable under recommended storage conditions; relatively non-hygroscopic

Possibility of Hazardous Reactions

None known under normal conditions



Conditions to Avoid	Moisture ingress, prolonged exposure to heat
Incompatible Materials	Strong oxidising agents

Section 11 — Toxicological Information

Acute Toxicity	Not classified as harmful by ingestion based on available data; low toxicity profile consistent with long history of use in human drugs and personal care products
Skin Corrosion/Irritation	Causes skin irritation (Category 2)
Serious Eye Damage/Irritation	Causes serious eye irritation (Category 2)
Respiratory Irritation	May cause respiratory irritation (STOT-SE Category 3)
Carcinogenicity / Mutagenicity / Reproductive Toxicity	Not classified

Section 12 — Ecological Information

Ecotoxicity	Displays low toxicity to aquatic and mammalian systems; highly soluble in water with low partition coefficient, likely to remain in the water compartment
Persistence and Degradability	Expected to be biodegradable
Bioaccumulative Potential	Not expected to bioaccumulate given low log Kow

Section 13 — Disposal Considerations

Disposal Method	Dispose of as general laboratory chemical waste via a licensed waste contractor in accordance with EPA (Victoria) requirements. Recycle wherever possible.
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Section 14 — Transport Information

UN Number	Not applicable — not classified as dangerous goods
Transport Hazard Class	Not applicable — ADG, IMDG, IATA: Not Dangerous Goods

Section 15 — Regulatory Information



Australian Regulations

Not classified as a Scheduled Poison under the SUSMP. Listed on the Australian Inventory of Industrial Chemicals (AIIC) where applicable.

International Inventories

EC number 201-064-4; listed on relevant chemical inventories (TSCA, EINECS) where applicable

Section 16 — Other Information

Preparation Date

OCT 2024

Revision

Rev. 1.0

Key Data Sources

Sigma-Aldrich (Trizma base) SDS data; Wikipedia (Tris); Santa Cruz Biotechnology MSDS (Tris base, sc-3715)

Disclaimer

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