

SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY INFORMATION

Manufacturer Life Sciences Advanced Technologies, Inc.
 2900 72nd ST N – St. Petersburg, FL 33710
 727.345.9371 – www.lifesci.com – info@lifesci.com

GHS Product Identifier: Tris Base

Other Means of Identification: 2-Amino-2-(hydroxymethyl)-1,3-propanediol
 THAM
 Trometamol
 Tris(hydroxymethyl)aminomethane

Product Type: Organic chemical compound

Recommended Uses & Restrictions on Use: In-Vitro Research Use Only. Not for Diagnostic or Clinical use. Not for use in Humans.

Emergency Phone Number: CHEMTREC: 800.424.9300 Outside US: 703.527.3887

SECTION 2: HAZARD IDENTIFICATION

Signal Word: **WARNING**

Physical Hazards: Irritation to eyes, nose, respiratory system, and skin possible.

Health Hazards: Toxicity to body and organs is possible.



Pictogram:

Precautionary Statements:

Prevention: Wear protective clothing, gloves, eye protection at minimum. Wear face mask if necessary.

Response: See Section 4: First Aid Measures.

Storage: 10°C to 30°C

Disposal: Dispose by means that comply with local, state and federal regulations; Do NOT Dispose down drain.

Environmental Hazards: None

HNOC:* N/A

Supplemental info: N/A

*Hazards Not Otherwise Classified

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number
Tris Base	77-86-1

SECTION 4: FIRST AID MEASURES

General Advice: The wearing of gloves, eye protection, and protective clothing is advised.

Inhalation: Take susceptible person to fresh air.

Skin Contact: Wash skin copiously with water and with a mild detergent.

Eye Contact: Rinse eyes copiously with water.

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Ingestion: Drink copious amounts of water to flush out.

Indication of immediate medical attention and special treatment needed: If susceptible person experiences dizziness, vomiting, loss of eye sight, shortness of breath, or pain.

SECTION 5: FIREFIGHTING MEASURES

Suitable Extinguishing Media: CO₂, dry powder, alcohol-resistant foam, polymer foam or water spray.

Specific hazards arising from the substance or mixture: Hazardous decomposition of products under fire conditions such as carbon oxides and nitrogen oxides (NO_x).

Special protective equipment and precautions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Advice for firefighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Further Information: None

SECTION 6: ACCIDENTAL RELEASE MEASURES

Emergency Action: Wear protective clothing. Ventilate the area. Avoid dust formation and breathing vapors, mist or gas.

Spill/Leak Procedure: Wear protective clothing. Ventilate the area of the spill. Sweep up and shovel. Keep in a dry, suitable closed container for disposal. Wash site with water.

Disposal: Dispose by means that comply with local, state and federal regulations. Do not let product enter drains.

Notification: None Needed.

SECTION 7: HANDLING AND STORAGE

Handling: Wear gloves, protective clothing, and eye protection when handling. Provide appropriate exhaust ventilation where dust is formed.

Storage: Store at a temperature between 10-30°C in a dry watertight container. Store under inert gas as it is Hygroscopic. Do NOT store near strong oxidizing agents, acids or heat. Do NOT store in Aluminum or Copper container.

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION

Component Exposure Limits:

Hazardous Chemical Name – Tris Base [See Toxicological Information in Section 11]

Engineering Controls: None.

Eye and Face Protection: Use equipment for eye protection as tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Use mask if needed.

Skin Protection: Lab coat, gloves, and closed toed shoes. Gloves must be inspected prior to use. Use proper glove removal technique (without touching the glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Respiratory Protection: Not required but use mask if needed. Use type N95 (US) or type P1 (EN 143) Dust Masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Other Protective Equipment: None.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical	Crystalline	Molecular Mass	121.14 g/mol
Specific Gravity	No Data Available	Flash Point	No Data Available
pH	10.0 – 12.0	Flammability	No Data Available
Solubility	678 g/L at 20°C (68°F) (>55g/100mL) in water 2.2 g/100mL in Ethanol 2g/100mL in Acetone Soluble in Methanol Soluble in Ethyleneglycol	Upper/Lower Flammability Limits	No Data Available
Odor	Amine-like odor, mild.	Auto-ignition Temperature	Not Self-Heating
Odor Threshold	No Data Available	Decomposition Temperature	No Data Available
Evaporation Rate	No Data Available	Vapor Pressure	No Data Available
Melting Point (°F/°C)	170°C (338°F)	Vapor Density (@20°C)	4.2
Boiling Range	Decomposes below boiling point	Relative Density	No Data Available
Initial Boiling Point (°F/°C)	288°C (550°F) at 1,013 hPa (760 mmHg)	Partition Coefficient	Log Pow: -2.31 at 20°C (68°F)
Critical Temperature	No Data Available	Viscosity	No Data Available

SECTION 10: STABILITY AND REACTIVITY

Reactivity: No Data Available. Keep away from strong oxidizing agents

Chemical Stability: Between 10-30°C

Incompatibility/Conditions to Avoid: Hygroscopic. Keep away from strong oxidizing agents.

Hazardous Polymerization: None known.

Hazardous Decomposition Products: Carbon Oxides, Nitrogen Oxides (NOx)

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity	Oral LD50 LD50 Oral - rat - > 5,000 mg/kg Inhalation LC50 no data available Dermal LD50 LD50 Dermal - rat - > 5,000 mg/kg Other information on acute toxicity no data available
Skin corrosion/irritation	Skin - rabbit - No skin irritation - OECD Test Guideline 404
Serious eye damage/eye irritation	Eyes - rabbit - No eye irritation - OECD Test Guideline 405
Respiratory or skin sensitization	Buehler Test - guinea pig - OECD Test Guideline 406 - Does not cause skin sensitization.
Germ cell mutagenicity	Genotoxicity in vitro - Not mutagenic in Ames Test. Genotoxicity in vitro - in vitro assay - negative

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In vitro tests did not show mutagenic effects

Genotoxicity in vivo - In vivo tests did not show any chromosomal changes.

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity No Data Available

Teratogenicity No Data Available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No Data Available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No Data Available

Aspiration hazard No Data Available

Potential health effects

Ingestion: May be harmful if ingested.

Eye Contact: May cause eye irritation in susceptible person.

Skin Contact: May cause skin irritation in susceptible person.

Inhalation: May cause respiratory irritation in susceptible person.

Acute Toxicity: May cause acute toxicity in large quantities in susceptible person.

Chronic effects: Not known.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects No Data Available

Additional Information

Repeated dose toxicity - rat - Oral - No observed adverse effect level - 1,000 mg/kg

RTECS: TY2900000

Supplemental Information: None.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity: **Toxicity to daphnia and other aquatic invertebrates**

EC50 - Daphnia - > 980 mg/l - 48 h

Toxicity to algae EC50 - Algae - 397 mg/l - 72 h

NOEC - Algae - 100 mg/l - 72 h

Persistence and degradability: Biodegradability Result: - Readily biodegradable.

Method: OECD Test Guideline 301F



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Bioaccumulative potential: No bioaccumulation is to be expected (log Pow <= 4).
Mobility in soil: No Data Available
PBT and vPvB assessment
Results of PBT assessment: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
Other adverse effects: No Data Available

SECTION 13: DISPOSAL CONSIDERATION

Disposal Methods:

Product – Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated Packaging – Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

DOT (US): Non-Hazardous
IMDG: Non-Hazardous
IATA: Non-Hazardous

SECTION 15: REGULATORY INFORMATION

International Inventories

TSCA - Complies **Legend:**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations

OSHA Hazards - No Known OSHA Hazards

SARA 302 Components - No Chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components – This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards – No SARA Hazards

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

U.S. State Right-to-Know Regulations

Massachusetts Right Know Components - No components subject

Pennsylvania Right to Know Components - Tris (Hydroxymethyl) aminomethane CAS No: 77-86-1

New Jersey Right to Know Components - Tris (Hydroxymethyl) aminomethane CAS No: 77-86-1

California Proposition 65 - This product does not contain any Proposition 65 chemicals.



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U.S. EPA Label Information - EPA Pesticide Registration Number Not applicable

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Eye Irrit. 2 H319

STOT SE 3 H335

Skin Irrit. 2 H315

Full text of H-phrases: see section 16.

Classification according to Directive 67/548/EEC or 1999/45/EC

Xi; R36/37/38

Full text of R-phrases: see section 16.

SECTION 16: OTHER INFORMATION

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.