

Material Safety Data Sheet (MSDS)

Product Name: L- Threonine

MSDS Generate Date: 20-05-2017

Revision Date: 30-12-2024

Supplier:

Rawpharma Biz Pvt Ltd

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1. Identification of the Substance/Preparation and Company

- **Chemical Name:** L- Threonine
- **Synonyms:** L-Threonine, 2-Amino-3-hydroxybutanoic acid
- **CAS Number:** 72-19-5
- **Molecular Formula:** $C_4H_9NO_3$
- **Molecular Weight:** 119.12 g/mol

2. Composition/Information on Ingredients

- **Ingredient:** Threonine
- **Purity:** $\geq 98\%$
- **Hazardous Components:** None

3. Hazards Identification

- **Emergency Overview:** Non-toxic, non-flammable solid. May cause mild irritation to eyes, skin, or respiratory tract if dust is inhaled.
 - **Health Hazards:** Non-toxic, generally safe as per dietary standards.
 - **Environmental Hazards:** Not harmful to aquatic life in normal use.
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4. First Aid Measures

- **Inhalation:** Move to fresh air. Seek medical attention if irritation persists.
 - **Skin Contact:** Wash with soap and water.
 - **Eye Contact:** Rinse eyes with plenty of water for 15 minutes.
 - **Ingestion:** Rinse mouth. Consult physician if large amounts ingested.
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5. Fire-Fighting Measures

- **Flammability:** Not flammable.
 - **Suitable Extinguishing Media:** Water spray, CO₂, dry chemical, or foam.
 - **Special Hazards:** None under normal conditions.
 - **Protective Equipment:** Wear self-contained breathing apparatus if necessary.
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6. Accidental Release Measures

- Sweep or scoop spilled material carefully to avoid dust.
 - Avoid generating dust clouds.
 - Dispose of according to local regulations.
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7. Handling and Storage

- **Handling:** Avoid inhalation of dust. Use personal protective equipment (PPE).
 - **Storage:** Store in a cool, dry, and well-ventilated area, away from incompatible substances.
 - **Packaging:** Keep container tightly closed.
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8. Exposure Controls/Personal Protection

- **Engineering Controls:** Adequate ventilation.
- **Respiratory Protection:** Dust mask if handling large quantities.
- **Hand Protection:** Protective gloves recommended.
- **Eye Protection:** Safety goggles.
- **Skin Protection:** Protective clothing if necessary.

9. Physical and Chemical Properties

- **Appearance:** White crystalline powder
- **Odor:** Odorless
- **pH:** 5 – 7 (1% solution)
- **Melting Point:** 262–265°C (decomposes)
- **Solubility:** Soluble in water, slightly soluble in ethanol

10. Stability and Reactivity

- **Stability:** Stable under normal conditions.
- **Conditions to Avoid:** Excessive heat, moisture.
- **Incompatible Materials:** Strong oxidizing agents.
- **Hazardous Decomposition Products:** Nitrogen oxides and carbon oxides when heated to decomposition.

11. Toxicological Information

- **Acute Toxicity:** Low; oral LD50 (rat) > 5000 mg/kg.
- **Skin/Eye Irritation:** Mild irritation possible.
- **Carcinogenicity:** Not listed as carcinogenic.
- **Chronic Effects:** None reported.

12. Ecological Information

- **Biodegradability:** Readily biodegradable.
- **Bioaccumulation:** Not expected to bioaccumulate.
- **Ecotoxicity:** Low environmental hazard in normal use.

13. Disposal Considerations

- Dispose of in accordance with local, state, and national regulations.
- Avoid release into waterways.
- Contaminated packaging should be emptied and properly disposed of.

14. Transport Information (Detailed)

UN Number: Not regulated

UN Proper Shipping Name: Not regulated for transport

Transport Hazard Class: None

Packing Group: Not applicable

Environmental Hazards: No special precautions necessary.

Transport Methods:

- **Road/Rail (ADR/RID):** Not restricted. Use standard precautions for powdered solids.
- **Air (IATA/ICAO):** No restrictions; package securely to avoid moisture.
- **Sea (IMDG):** Non-hazardous; ensure the container is intact and protected from seawater.

Handling During Transport:

- Avoid spilling or generating dust.
- Keep containers upright and secure to prevent tipping.
- Use moisture-resistant packaging in humid conditions.
- No special ventilation is required during transport, but avoid extreme temperatures (>50°C) to prevent degradation.

Emergency Procedures:

- In case of spillage during transport, follow standard clean-up procedures for non-toxic powders: sweep carefully, avoid dust, and dispose safely.

Labeling Requirements:

- No hazard labels required under normal transport regulations.
- Include product name, manufacturer details, and net weight on packaging.

15. Regulatory Information

- Complies with local and international regulations for amino acids.
- Not classified as hazardous under OSHA, EU, or GHS guidelines.

16. Other Information

- Disclaimer: The information provided is based on current knowledge and is intended to describe the product for health, safety, and environmental purposes. It should not be construed as guaranteeing any specific property of the product.
- **MSDS Generate Date:** 20-05-2017
- **Revision Date:** 30-12-2024
- **Website:** www.rawpharmabiz.com
- MSDS are based on the manufacturer's provided information.