SAFETY DATA SHEET:

AJINOMOTO®

L-THREONINE

The information is provided as a service to our customers and is intended only for their use. This information is based on technical information believed to be reliable and will be revised as new knowledge or experience is gained.

Date of issue:	January 6, 2003	
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1. Chemical Product and Company Identification

1.1. Identification of the substance: L-Threonine

1.2. Use of the substance: Various use (drugs, nutritional, industrial)

1.3. Company identification:

Manufacturer's Name: Ajinomoto North America, Inc. / Shanghai Ajinomoto Amino Acid Co., Ltd.

1.4. **Contact for Correspondence Japan:**
Ajinomoto Co., Ltd.
15-1, Kyobashi 1-chome, Chuo-ku, Tokyo
104-8315, Japan
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Fax N°: +81-(0)3-5250-0079

Contact for Correspondence USA:
Ajinomoto North America,Inc.
4020 Ajinomoto Drive, Raleigh,
N.C. 27610, U.S.A.
Tel N°: +919-325-1400
Fax N°: +919-325-1420

Contact for Correspondence Brazil:
Ajinomoto do Brasil Indústria e Comércio de Alimentos Ltda.
Rua Vergueiro, 1737, Vila Mariana,
04101-001 – São Paulo – SP, Brazil1348 Louvain-la-Neuve, Belgium
Tel N°: +55 11 5080-6700
Fax N°: +55 11 5080-6789

Contact for Correspondence Europe:
S.A. Ajinomoto Omnichem N.V.
Industrial Research Park Fleming
Tel N°: +32 10 483222
Fax N°: +32 10 456227

Contact for Correspondence China:
Ajinomoto(China) Co., Ltd.
718 Rongle Dong Road, Songjiang,Shanghai
201613 P.R. China
Tel N°: +86 21 5774-5353
Fax N°: +86 21 5774-0433

Contact for Correspondence Asia:
Ajinomoto Co., (Hong Kong) Ltd.
Room 2102, 21F., Bangkok Bank Bldg.
14-20 Bonham Strand West, Hong Kong
Tel N°: +852 2534-2888
Fax N°: +852 2534-2899

1.5. **Emergency Telephone**:
In continental U.S., Hawaii, Puerto Rico, Canada, Alaska and Virgin Islands contact **CHEMTREC** at 1-800-424-9300.

For Japan, Brazil , Europe, China and Asia refer to section 1.4

2. Hazards Identification

GHS Classification of the substance

Physical hazards:	Not applicable
Health hazards:	Not applicable
Environmental hazards:	Not applicable
Label elements:	Not applicable
Potential effects:	May cause eye and skin irritation. It will increase the biological oxygen demand (BOD) of water.

3. Composition, Information on Ingredients

Substance or Mixture:	Substance
Common Chemical name:	L-Threonine
Synonyms:	(2S,3R)-2-Amino-3-hydroxybutanoic acid
Formula:	$C_4H_9NO_3$
Molecular Weight:	119.12
Composition:	99.0 - 101.0%
CAS No.:	72-19-5
EINECS No.:	200-774-1
IUPAC:	L-Thr

4. First-Aid Measures

Inhalation: Immediately relocate to a fresh air environment. Rinse mouth with water. If not breathing, give artificial respiration. If breathing becomes difficult, give oxygen and seek medical attention.

Skin Contact: Wash with soap and copious amounts of water. If irritation persists, seek medical attention.

Eye Contact: Immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating eyelids with fingers. If contact lenses are being worn, remove lenses and continue rinsing. Seek medical attention.

Ingestion: Rinse mouth with water and seek medical attention.

5. Fire-fighting measures

Flash point (method used):	Not known
Flammable limits:	Not known
Extinguishing media:	Water spray, carbon dioxide, dry chemical powder/foam
Special fire fighting procedures:	Minimize dust formation
Unusual fire and explosion hazards:	Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Upon combustion will result in carbon monoxide, carbon dioxide and nitrogen oxide being released.

6. Accidental release measures

Personal precautions, protective equipment: Use personal protection, see section 8.

Precautions for the environment:	Do not discharge into sewer, river, underground water, etc.
Recovery, neutralization:	Make spills wet to prevent the generation of dust and then, sweep up into a closed container.
Method for containment and clean-up:	After recovering, wash away spilled area with plenty of water.

7. Handling and storage

7.1. Handling: Follow good industrial practice in housekeeping and personal hygiene. Wear personal protective equipment as outlined in section 8.

7.2. Storage: Store in closed containers in a dry area. Avoid humidity, sunlight and high temperature.

8. Exposure controls/personal protection

Respiratory protection:	Dust mask or appropriate respirator. Utilize local exhaust ventilation.
Protective gloves:	Rubber
Eye protection:	Chemical safety goggles
Other protective equipment:	Wear appropriate laboratory apparel, protect exposed skin.
Occupational exposure limits:	Not established

9. Physical and chemical properties

Appearance:	White crystals or crystalline powder
Melting point:	255-257°C (decomposes)
Solubility:	9.00 g/100g H_2O (20°C)
pH:	5.2-6.2 (0.20g in 20mL of H_2O)

10. Stability and reactivity

Stability:	Stable under normal temperature and pressures
Conditions to avoid:	Humidity and high temperature
Incompatibility (Materials to avoid):	Strong oxidizing agents
Hazardous decomposition products:	Nitrogen oxides (combustion)
Hazardous Polymerization:	Will not occur

11. Toxicological information

Acute oral toxicity:	LD_{50} > 16 g/kg rat
Sensitization:	No data available
Mutagenicity:	No data available
Primary skin irritation:	May cause skin irritation. No specific data available
Primary eye irritation:	May cause eye irritation. No specific data available

12. Ecological information

Toxic effects to fish, algae, and daphnia:	No data available
Potential for bioaccumulation:	No data available
Biodegradability:	BOD= 0.811 g/g
WGK class (Europe):	1 (group classification according to VwVwS / 17 May 1999, Germany)

13. Disposal considerations

Dispose of the material as you would with a non-hazardous material in accordance with all applicable national, state and local regulations.

14. Transport information

Avoid humidity and high temperature. Prevent damage of the container.

UN-Classification:	Not classified
US Department of Transportation proper shipping name:	L-Threonine
US NMFC classification:	Item 60,000 / class 70

15. Regulatory information

None especially.

The information given in this Safety Data Sheet does not replace the users own assessment of workplace risk as required by national, state and local health and safety legislation.

16. Other information

The information contained in this SDS is, to the best of our knowledge true and accurate. Any recommendations or suggestions made are without guarantee, since the conditions of use are beyond our control.