



SAFETY DATA SHEET

L-Tryptophan [Feed Grade (98%)]

1. IDENTIFICATION

1.1. Product identifier

Trade Name: L-Tryptophan 98% Feed Grade

1.2. Relevant identified uses of the product

Identified Uses: This product shall exclusively be used in animal nutrition. It shall not be used for any food application

1.3. Identification of the Company

Manufacturer and Distributer:

Ajinomoto Animal Nutrition North America, Inc.
1116 Hwy 137
Eddyville, Iowa 52553

Phone: 641- 969-4551 – Eddyville IA
773-380-7000 – Chicago, IL.

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

Not a hazardous substance or mixture according to Directive 67/548/EEC

2.2. Label Elements

Labeling according to regulation (EC) No 1272/2008 [EU-GHS/CLP]



Signal Word:

Warning

Hazard Statement:

May form combustible concentrations in air

H335: May cause respiratory irritation

Labeling according to Directive 67/548/EEC

Symbol (s):

None Defined

2.3. Other Hazards: None



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3. COMPOSITION/INFORMATION ON INGREDIENTS

Components:	Concentration
L-Tryptophan content	98% (on a dry matter basis)
Crude Protein (%/16 g-N)	84% (on a dry matter basis)

Synonyms:

(S)- α *amino-1-H-indole-3-propanoic acid (The Merck Index)
1- α -aminoindole-3-propionic acid (The Merck Index)
1- α -amino-3-indolepropionic acid (The Merck Index)
2-amino-3-indolylpropanoic acid (The Merck Index)
1- β -3-indolylalanine (The Merck Index)

Chemical Formula: C₁₁H₁₂N₂O₂

No CAS: 73-22-3

No EINECS: 200-795-6

4. FIRST AID MEASURES

4.1. Description of first aid measures

If inhaled:

In case of breathing trouble, immediately relocate to a fresh air environment. Seek medical attention.

In case of skin contact

In case of exposure, wash with soap and copious amounts of water. If irritation persists, seek medical attention.

In case of eye contact

Flush eyes with copious amounts of water for at least 15 minutes. Ensure adequate flushing by separating eyelids with fingers. If contact lenses are worn, remove lenses and continue rinsing. Seek medical attention.

If swallowed

Rinse mouth with water. If any trouble appears, seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed

No data available

4.3. Indication of any immediate medical attention and special treatment needed



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No data available

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Water spray, carbon dioxide, dry chemical powder/foam.

5.2. Special hazards arising from substance or mixture



Warning - Product may form combustible concentrations when dispersed in air

5.3. Advice for firefighters

Wear protective clothing and breathing mask to protect from fumes

5.4. Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

(See paragraph 8).

6.2. Environmental precautions

In case of release in large quantities, avoid releasing in sewers and water courses.

6.3. Methods and materials for containment and cleaning

Prevent spills from entering sewers and water courses.

Avoid dust generation and ventilate the area. Collect the product and place it in bags or containers for later disposal and elimination as waste, according to local legislation. After material has been removed, rinse the spill site with water.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Follow good manufacturing practice and personal hygiene.

Standard precautions for powdered products or products generating dust:

- Avoid dust dispersion during grinding or blending operations
- Provide mechanical exhaust or ventilation



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- Clean and eliminate dust from equipment regularly
- Use anti-static equipment
- Avoid heat sources and sparks.

7.2. Conditions for safe storage, including any incompatibilities

In the bags in which the product has been delivered.
Keep in dry conditions.
Keep away from ignition and heat sources. Avoid exposure to electrostatic discharge.

7.3. Specific end uses

No data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Components with workplace control parameters

Does not contain any substance subject to an exposure limit value.

8.2. Exposure controls

Engineering controls

No data available

Personal protective equipment

Eye/face protection

Wear safety goggles in case of direct contact

Body protection

Wear protective clothes covering skin. Discard or wash protective clothes after exposure to dust of the product.

Skin protection

Wear gloves, especially in case of extended contact

Respiratory protection

Wear a mask covering both nose and mouth.



Signal Word:

Warning

Precautionary Statement:

P261: Avoid breathing dust

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present



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and easy to do. Continue rinsing.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Yellowish – White, crystalline powder
Odor	No particular odor
pH	4.5 to 7 (5% solution)
Apparent Specific gravity	0.2 to 0.3 kg/l
Water solubility	20°C: 1.136 g/ 100g
Partition coefficient: n-octanol / water	Log Pow = -1.04
Auto ignition	700°C [measure according to standards IEC-1241-2-1 Part 2, method B and EN 50281-2-1 (2000)]
Minimum ignition energy	MIE: 2.4 mJ
Cloud temperature	MCIT: > 580°C
Explosive properties	Pmax: 8.1 bars Kst: 250 bar.m.s ⁻¹ MEC: 56 g/m ³ The product is classified as an ST1 hazard

9.2. Other safety information



Warning: May form combustible concentrations in air when dispersed.

10. STABILITY AND REACTIVITY

10.1. Reactivity

Exothermic reaction between 340°C and 360°C

10.2. Chemical stability

Stable if stored in dry conditions.

10.3. Possibility of hazardous reactions

Warning: May form combustible concentrations in air when dispersed.

10.4. Conditions to avoid

Avoid electrostatic sparks and ignition sources.



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10.5. Incompatible materials

No data available on incompatible materials.

10.6. Hazardous decomposition products

No data available.

11. TOXICOLOGICAL INFORMATION

11.1. Acute toxicity

Acute oral toxicity: Not harmful when ingested: acute oral LD50 > 2000mg/kg in rat.

Acute inhalation toxicity: Not harmful when inhaled: LC50 ≥ 5.26 g/m³

11.2. Skin corrosion / irritation

'L-Tryptophan, technically pure' is not irritating to (human) skin (according to EC standards, OJEC, L 110 A, Vol 36, 4 May 1993)

11.3. Serious eye damage / eye irritation

'L-Tryptophan, technically pure' is not irritating to (human) eyes (according to EC standards, OJEC, L 110 A, Vol 36, 4 May 1993).

11.4. Respiratory or skin sensitization.

Not sensitizing for the skin (LLNA test)

11.5. Germ cell mutagenicity

Not mutagenic (Bacterial reverse mutation test, Gene mutation test at the TK-locus of L5178Y cells, Chromosomal aberration test in cultured Chinese hamster Ovary (CHO) cells). In vitro micronucleus test in cultured human lymphocytes, Bone marrow ('in vivo') micronucleus test incorporated in a repeated-dose (13 week) oral toxicity study in rats.

11.6. Carcinogenicity

Not carcinogenic

11.7. Reproductive toxicity

To the best knowledge of Ajinomoto, no effect on fetal development.

11.8. Specific target organ toxicity – single exposure

No data available

11.9. Specific target organ toxicity – repeated exposure

No data available

11.10. Aspiration hazard



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No data available

11.11. Signs and symptoms of exposure

No data available

11.12. Additional information

NOAEL (No adverse effect level, oral administration) is conservatively: 628 mg/kg bw (90 days ingestion in rats).

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Not toxic for animal and plant.

12.2. Persistence and degradability

Biodegradable

12.3. Bioaccumulative potential

None.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

When a large quantity of the product is released in a river or waste treatment plant, the ecosystem or the functioning of the plant may be disturbed due to increased demand in oxygen required to degrade the product (increase of the biological oxygen demand – BOD - of water)

13. Disposal Consideration

Waste treatment method: Treat wastes in accordance with the local/national legislation and or environmental regulations that apply.

14. Transport Information

14.1. UN Number



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ADR / RID: -

IMDG: -

IATA: -

14.2. UN proper shipping name

ADR / RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3. Transport hazard class (es)

ADR / RID: -

IMDG: -

IATA: -

14.4. Packing group

ADR / RID: -

IMDG: -

IATA: -

14.5. Environmental hazards

ADR / RID: No

IMDG Marine pollutant: No

IATA: No

14.6. Special precautions for user

No data available

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

'L-Tryptophan, technically pure' (Commercial name: L-Tryptophan 98% Feed Grade is in the scope of Regulation (EC) No 1831 / 2003 of 22 / 09 / 2003 on additives for use in animal nutrition (OJ EU n° L 268 of 18 / 10 / 2003), category: "nutritional additives", functional group: "amino acids, their salts and analogues". It is approved for all animal species.

15.2. Chemical Safety Assessment

No data available

16. OTHER INFORMATION : None