



# 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

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#### Labeling according to Directive 67/548/EEC

Symbol (s): None Defined

2.3. Other Hazards: None

### 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)- $\alpha$ \*amino-1-H-indole-3-propanoic acid (The Merck Index)  
1- $\alpha$ -aminoindole-3-propionic acid (The Merck Index)  
1-  $\alpha$ -amino-3-indolepropionic acid (The Merck Index)  
2-amino-3-indolylpropanoic acid (The Merck Index)  
1- $\beta$ -3-indolylalanine (The Merck Index)

Chemical Formula: C<sub>11</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub>

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

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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**

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.

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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
- 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

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**Skin protection**

**Respiratory protection**



Signal Word:

Precautionary Statement:

the product.

Wear gloves, especially in case of extended contact

Wear a mask covering both nose and mouth.

Warning

P261: Avoid breathing dust

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present 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 <sup>-1</sup> MEC: 56 g/m <sup>3</sup>
	The product is classified as an ST1 hazard

#### 9.2. Other safety information

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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.

**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/m<sup>3</sup>

##### **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)

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#### 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:** 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**

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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**

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

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

**14.1** Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR, based on composition of ingredients listed in section 3 and 9.

#### **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:** The above information is believed to be accurate and represents the best information currently available to us and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product in regard to appropriate safety precautions. It does not represent any guarantee of the

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Eat Well, Live Well.



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properties of the product. Users should make their own investigations to determine the suitability of the information for their particular purposes. Ajinomoto Animal Nutrition North America, Inc. shall not be held liable for any damage resulting in the handling or from the contact with the above product.

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