SAFETY DATA SHEET

1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: L-Asparagine, Monohydrate
PRODUCT NUMBER: A107
COMPANY INFO: PhytoTech Labs Inc.
14610 W 106th St. Lenexa, KS 66215
Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442
www.phytotechlab.com
EMERGENCY PHONE NUMBER
(INFOTRAC): 1-800-535-5053 - US Only
1-352-323-3500 - International
RECOMMENDED USE: For Research Use Only
RESTRICIONS ON USE: Products sold by PhytoTech Labs Inc. are intended for research and laboratory use only.

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:
Not a hazardous substance or mixture.

GHS Label elements, including hazard and precautionary statements:
Not a hazardous substance or mixture.

Hazards not otherwise classified (HINOC) or not covered by GHS: - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: (S)-2,4-Diamino-4-oxobutanoic Acid
CAS No.: 5794-13-8
Formula: C_4H_8N_2O_3•H_2O
Molecular Weight: 150.1 g/mol
EC No.: 200-735-9

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Percent</th>
<th>Hazardous</th>
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<tbody>
<tr>
<td>L-Asparagine, Monohydrate</td>
<td>5794-13-8</td>
<td>&gt;99 %</td>
<td>No exposure limits established by OSHA or ACGIH</td>
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4. FIRST AID MEASURES

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Route of Entry | Symptoms | First Aid Procedures |
---------------|----------|----------------------|
Ingestion      | May cause irritation if swallowed | If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. Get medical attention. Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. Get medical attention. |
Inhalation     | May cause irritation to respiratory tract | |
Eye Contact

Direct contact may cause irritation. May cause redness, tearing, or blurred vision. Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.

Skin Contact

Irritating. May cause reddening, itching or inflammation. Wash area thoroughly with soap and water. Remove and wash contaminated clothing. Get medical attention if irritation persists.

Most Important Symptoms or Effects, Both Acute and Delayed:

See section 2 and/or section 11

Recommendation for Immediate Medical Care and Special Treatment Needed:

No data available

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:
Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.

SpecialProtective Equipment and Precaution for Firefighters:
In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus. Evacuate the area and fight fire from a safe distance.

Hazardous Combustion Products:
May emit toxic fumes under fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protection recommended in Section 8. Avoid dust formation. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas.

Environmental Precautions:
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Method of Containment and Cleanup:
Wear suitable protective clothing. Avoid dust formation. Carefully sweep up and remove. Place material in a dry container and cover. Remove from the area. Flush spill area with water. Do not let product enter drains.

7. HANDLING AND STORAGE

Precaution for Safe Handling:
Avoid contact with skin and eyes. Avoid incompatible substances. Wash thoroughly after use. Finely dispersed organic materials may be combustible. Do not breathe dust.

Conditions for Safe Storage:
Keep in a tightly closed container and store in a cool, dry, and well-ventilated area.

Incompatibilities:
Strong oxidizing agent

Recommended Storage Temperature:
Room Temperature

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA’s Permissible Exposure Limits (PELs): None
Threshold Limit Values (TLVs): None
Engineering Controls: Handle in accordance to general industrial hygiene and safety practice.

Personal Protective Equipment (PPE):

Eye/Face Protection: Chemical safety glasses or goggles. Have eye-washing facilities readily available where eye contact can occur.

Skin Protection: Protective gloves

Body Protection: Lab coat

Respiratory Protection: Respiratory protection is not required. Use N95 (US) or type P1 (EN 143) dust mask where dust level is nuisance. A NIOSH/MSHA approved air purifying respirator is recommended where airborne
concentrations are expected to exceed exposure limits. Protection provided by purifying respirators is limited.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White crystalline powder
pH: Under Development
Solubility: Soluble in water
Melting Point: 233-235 °C
Vapor Density: No data available
Vapor Pressure: No data available
Odor: Odorless
Odor Threshold: No data available
Viscosity: No data available
Relative Density: 1.58 g/cm³
Evaporation Rate: No data available
Initial Boiling Point and Boiling Range: No data available
Flammability (solid, gas): No data available
Partition coefficient: n-octanol/water): No data available
Auto-ignition Temperature: No data available
Decomposition Temperature: No data available
Flash Point (Closed Cup): No data available
Flammable Limits: Upper (%) – No data available Lower (%) – No data available

10. STABILITY AND REACTIVITY

Reactivity: No data available
Chemical Stability: Stable under normal conditions of use
Possibility of Hazard Reactions: No data available
Conditions to Avoid: Moisture, excessive heat
Incompatibles Materials: Strong oxidizing agents
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide, nitrogen oxides

11. TOXICOLOGICAL INFORMATION

Toxicity:
- LD₅₀ (Oral-Rat)(mg/Kg) No data available
- LD₅₀ (Oral-Mouse)(mg/Kg) No data available
- LD₅₀ (Dermal-Rabbit)(mg/Kg) No data available

Carcinogenicity:
- NTP: No
- IARC: No
- OSHA Reg: No

Reproductive Toxicity: No data available

Specific Target Organ Toxicity:
- Single Exposure: No data available
- Repeated Exposure: No data available
Target Organs: No data available
Routes of Entry: Ingestion, inhalation, skin and eye contact
NIOSH/RTECS NO: No data available

The toxicological properties of this product have not been thoroughly investigated

12. ECOLOGICAL INFORMATION
Ecotoxicity: No data available
Persistence and Degradability: No data available
Bioaccumulative Potential: No data available
Mobility in Soil: No data available
Other Adverse Effects: No data available

13. DISPOSAL CONSIDERATION
Disposal Procedure: Dispose in accordance with all applicable federal, state, and local environmental regulations.

14. TRANSPORT INFORMATION

Domestic (D.O.T.):
- Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)
- Hazard Class: N/A
- UN/NA: N/A
- Labels: N/A

International:
- IMDG: Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)
- Hazard Class: N/A
- UN/NA: N/A
- Labels: N/A

- IATA: Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)
- Hazard Class: N/A
- UN/NA: N/A
- Labels: N/A

15. REGULATORY INFORMATION

TSCA: No

SARA TITLE III:
- Section 302 (EHS) Ingredients: No
- Section 313 Ingredients: No
- Section 304 (EHS/CERCLA) Ingredients: No
- Section 311/312 Hazard: No SARA Hazards

Massachusetts Right to Know Components: This product is not on the Massachusetts Substance List (MSL).
Pennsylvania Right to Know Components: This product is not listed on the Pennsylvania Code’s Hazardous Substance List (Chapter 323).

New Jersey Right to Know Components: This product is not listed amongst the New Jersey Right to Know Hazardous Substance Fact Sheets

California Prop. 65 Components: This product is not known to the State of California to cause cancer or reproductive toxicity.

16. OTHER INFORMATION

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<th>Health Hazard</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
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