Material Safety Data Sheet
L-Phenylalanine

Section 1 - Chemical Product and Company Identification

**MSDS Name:** L-Phenylalanine
**Synonyms:** (S)-Alpha-Amino-Benzenepropanoic Acid; Beta-Phenyl-Alpha-Alanine; 3-Phenylalanine.

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>63-91-2</td>
<td>L-Phenylalanine</td>
<td>ca.100</td>
<td>200-568-1</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: white powder.

**Caution!** May cause eye and skin irritation. May cause respiratory and digestive tract irritation. This substance has caused adverse reproductive and fetal effects in animals. The toxicological properties of this material have not been fully investigated.

**Target Organs:** No data found.

**Potential Health Effects**

**Eye:** May cause eye irritation.

**Skin:** May cause skin irritation.

**Ingestion:** May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.

**Inhalation:** May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

**Chronic:** Prolonged or repeated exposure may cause adverse reproductive effects. May cause fetal effects. Laboratory experiments have resulted in mutagenic effects.

Section 4 - First Aid Measures
**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

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**Section 5 - Fire Fighting Measures**

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

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**Section 6 - Accidental Release Measures**

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

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**Section 7 - Handling and Storage**

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. May form flammable dust-air mixtures. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.
Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-Phenylalanine</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

Section 9 - Physical and Chemical Properties

**Physical State:** Powder

**Appearance:** white

**Odor:** slight odor

**pH:** Not available.

**Vapor Pressure:** Negligible.

**Vapor Density:** Not available.

**Evaporation Rate:** Negligible.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 270-275 deg C (dec)

**Decomposition Temperature:** 275 deg C

**Solubility:** Soluble.

**Specific Gravity/Density:** 0.754 (water=1)

**Molecular Formula:** C9H11NO2

**Molecular Weight:** 165.0825

Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, dust generation, excess heat.

**Incompatibilities with Other Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

**Hazardous Polymerization:** Has not been reported.
Section 11 - Toxicological Information

**RTECS#:**
CAS# 63-91-2: AY7535000
**LD50/LC50:**
Not available.

**Carcinogenicity:**
CAS# 63-91-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found

**Teratogenicity:** No information found

**Reproductive Effects:** Adverse reproductive effects have occurred in experimental animals.

**Mutagenicity:** Mutagenic effects have occurred in experimental animals.

**Neurotoxicity:** No information found

**Other Studies:**

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.
**RCRA U-Series:** None listed.

Section 14 - Transport Information

<table>
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<tbody>
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<td><strong>Shipping Name:</strong></td>
<td>Not regulated as a hazardous material</td>
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<tr>
<td><strong>Hazard Class:</strong></td>
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<tr>
<td><strong>UN Number:</strong></td>
<td></td>
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<tr>
<td><strong>Packing Group:</strong></td>
<td></td>
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</tbody>
</table>
Section 15 - Regulatory Information

**Hazard Symbols:**
Not available.

**Risk Phrases:**

**Safety Phrases:**
- S 37 Wear suitable gloves.
- S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S 28A After contact with skin, wash immediately with plenty of water

Section 16 - Additional Information

**MSDS Creation Date:** 7/14/1999
**Revision #5 Date:** 10/03/2005

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