EMERGENCY OVERVIEW - This material is considered to be non-toxic and non-hazardous in small quantities and under conditions of normal occupational exposure.

SECTION 1 - IDENTIFICATION

Common Name: L-Phenylalanine
Synonym: Phenylalanine
Chemical Name: L-Phenylalanine
CAS Number: 63-91-2
RTECS Number: AY7535000
Chemical Family: Alpha-Amino acid
Therapeutic Category: Amino acid (nutrient)

SECTION 2 - INGREDIENT INFORMATION

<table>
<thead>
<tr>
<th>Principle Components</th>
<th>Percent</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-Phenylalanine</td>
<td>Pure Material</td>
<td>n/f</td>
</tr>
</tbody>
</table>

SECTION 3 - HEALTH HAZARD INFORMATION

Usual Adult Dose: The recommended oral adult intake of L-phenylalanine is 2.2 grams per day.
Adverse Effects: Possible allergic reaction to material if inhaled, ingested or in contact with skin.
Overdose Effects: Adverse effects from ingestion of large amounts may include gastrointestinal irritation, nausea, vomiting, and diarrhea.
Acute: Possible eye, skin, gastrointestinal and/or respiratory tract irritation.
L-PHENYLALANINE

Catalog Number: 1530503  Package Size: 200 mg  Revision Date: January 17, 2003

Chronic: Possible hypersensitization.
Inhalation: May cause irritation. Avoid inhalation. Remove to fresh air.
Eye: May cause irritation. Flush with copious quantities of water.
Skin: May cause irritation. Flush with copious quantities of water.
Ingestion: May cause irritation and bitter taste. Flush out mouth with water.

Medical Conditions Aggravated by Exposure: Hypersensitivity to material.

Cross Sensitivity: n/f
Pregnancy Comments: n/f
Pregnancy Category: n/f

SECTION 4 - FIRST AID MEASURES

General: Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing give artificial respiration. If breathing is difficult give oxygen. Obtain medical attention.

Overdose Treatment: n/f

SECTION 5 - TOXICOLOGICAL INFORMATION

Oral Rat: LD50: n/f
Oral Mouse: LD50: n/f
Irritancy Data: n/f
Target Organ(s): n/f

Listed as a Carcinogen? NTP: No  IARC: No  OSHA: No
Other: No

SECTION 6 - FIREFIGHTING MEASURES

Flash Point: n/f  Upper Flammable Limit: n/f
Auto-Ignition Temperature: n/f  Lower Flammable Limit: n/f
Extinguisher Media: Water spray, dry chemical, carbon dioxide or foam as appropriate for surrounding fire and materials.
Fire and Explosion Hazards: This material is non-combustible. As with all dry powders it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential buildup of static electricity.
Firefighting Procedures: As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

SECTION 7 - PHYSICAL HAZARDS

Conditions to Avoid: n/f
Incompatibilities: Strong oxidizers
Decomposition Products: When heated to decomposition material emits toxic fumes of NOx. Emits toxic fumes under fire conditions.
L-PHENYLALANINE

Catalog Number: 1530503  Package Size: 200 mg  Revision Date: January 17, 2003

Stable?  Yes  Hazardous Polymerization?  No

SECTION 8 - HANDLING / SPILL / DISPOSAL MEASURES

Handling: As a general rule, when handling USP Reference Standards avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Wash thoroughly after handling.

Storage: Store in tight container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

Spill Response: Wear approved respiratory protection, chemically compatible gloves and protective clothing. Wipe up spillage or collect spillage using a high efficiency vacuum cleaner. Avoid breathing dust. Place spillage in appropriately labelled container for disposal. Wash spill site.

Disposal: Dispose of waste in accordance with all applicable Federal, State and local laws.

SECTION 9 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: When working with small quantities in a well-ventilated area, respiratory protection may not be required. The use of an approved dust mask is recommended.

Ventilation: No special ventilation requirements.

Gloves: Rubber

Eye Protection: Safety Glasses

Protective Clothing: Protect exposed skin.

SECTION 10 - PHYSICAL AND CHEMICAL PROPERTIES

NOTE: The data reported below is general information, and is not specific to the USP Reference Standard Lot provided!

Appearance and Odor: White needles, flakes, or crystalline powder; odorless or slight odor.

Melting Point: 283° C (decomposes)

Solubility in Water: Soluble  Vapor Density: n/f

Boiling Point: n/f  Evaporation Rate: n/f

Specific Gravity: 0.754  Reactivity in Water: n/f

Vapor Pressure: n/f  % Volatile by Volume: n/f