



## Material Safety Data Sheet

From: Mallinckrodt Baker, Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865



All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

24 Hour Emergency Telephone: 908-859-2151  
CHEMTREC: 1-800-424-9300

National Response in Canada  
CANUTEC: 613-996-6666

Outside U.S. And Canada  
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

# L-ASPARAGINE MONOHYDRATE

## 1. Product Identification

**Synonyms:** Asparagine; [(s)-(+)-asparagine, (S)-(+)-2-aminosuccinic acid]

**CAS No.:** 70-47-3 (Anhydrous) 5794-13-8 (Monohydrate)

**Molecular Weight:** 150.14

**Chemical Formula:** C<sub>4</sub>H<sub>8</sub>O<sub>3</sub>N<sub>2</sub>.H<sub>2</sub>O

**Product Codes:** 2068

## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
L-Asparagine	70-47-3	98 - 100%	Yes

## 3. Hazards Identification

### Emergency Overview

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

**SAF-T-DATA<sup>(tm)</sup>** Ratings (Provided here for your convenience)

Health Rating: 1 - Slight

Flammability Rating: 1 - Slight

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT; PROPER GLOVES

Storage Color Code: Green (General Storage)

### Potential Health Effects

#### Inhalation:

No adverse health effects expected from inhalation.

#### Ingestion:

Large doses may cause gastro-intestinal upset.

#### Skin Contact:

No adverse effects expected.

#### Eye Contact:

No adverse effects expected but dust may cause mechanical irritation.

#### Chronic Exposure:

No information found.

#### Aggravation of Pre-existing Conditions:

No information found.

## 4. First Aid Measures

**Inhalation:**

Remove to fresh air. Get medical attention for any breathing difficulty.

**Ingestion:**

If large amounts were swallowed, give water to drink and get medical advice.

**Skin Contact:**

Wash exposed area with soap and water. Get medical advice if irritation develops.

**Eye Contact:**

Wash thoroughly with running water. Get medical advice if irritation develops.

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## 5. Fire Fighting Measures

**Fire:**

As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

**Explosion:**

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Fire Extinguishing Media:**

Water spray, dry chemical, alcohol foam, or carbon dioxide.

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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## 6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

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## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Protect from freezing. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

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## 8. Exposure Controls/Personal Protection

**Airborne Exposure Limits:**

None established.

**Ventilation System:**

Not expected to require any special ventilation.

**Personal Respirators (NIOSH Approved):**

Not expected to require personal respirator usage.

**Skin Protection:**

Wear protective gloves and clean body-covering clothing.

**Eye Protection:**

Use chemical safety goggles.

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## 9. Physical and Chemical Properties

**Appearance:**

White crystals.

**Odor:**

No information found.

**Solubility:**

Soluble in acids and alkalis.

**Density:**

1.58

**pH:**

No information found.

**% Volatiles by volume @ 21C (70F):**

0

**Boiling Point:**

Not applicable.

**Melting Point:**

242C (468F)

Vapor Density (Air=1):  
No information found.  
Vapor Pressure (mm Hg):  
No information found.  
Evaporation Rate (BuAc=1):  
No information found.

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## 10. Stability and Reactivity

**Stability:**  
Stable under ordinary conditions of use and storage.  
**Hazardous Decomposition Products:**  
Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.  
**Hazardous Polymerization:**  
Will not occur.  
**Incompatibilities:**  
Strong oxidizers.  
**Conditions to Avoid:**  
Heat, flames, ignition sources and incompatibles.

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## 11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

-----\Cancer Lists\-----			
Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
L-Asparagine (70-47-3)	No	No	None

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## 12. Ecological Information

**Environmental Fate:**  
No information found.  
**Environmental Toxicity:**  
No information found.

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## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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## 14. Transport Information

Not regulated.

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## 15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----				
Ingredient	TSCA	EC	Japan	Australia
L-Asparagine (70-47-3)	Yes	Yes	Yes	Yes
-----\Chemical Inventory Status - Part 2\-----				
Ingredient	---Canada---			
	Korea	DSL	NDSL	Phil.
L-Asparagine (70-47-3)	Yes	Yes	No	Yes
-----\Federal, State & International Regulations - Part 1\-----				
Ingredient	-SARA 302-		-SARA 313-	
	RQ	TPQ	List	Chemical Catg.
L-Asparagine (70-47-3)	No	No	No	No
-----\Federal, State & International Regulations - Part 2\-----				
Ingredient	-RCRA-		-TSCA-	
	CERCLA	261.33	8(d)	

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L-Asparagine (70-47-3)                      No                      No                      No  
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Chemical Weapons Convention: No      TSCA 12(b): No      CDTA: No  
SARA 311/312: Acute: No      Chronic: No      Fire: No      Pressure: No  
Reactivity: No      (Pure / Solid)

**Australian Hazchem Code:** None allocated.

**Poison Schedule:** None allocated.

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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## 16. Other Information

**NFPA Ratings:** Health: 0 Flammability: 1 Reactivity: 0

**Label Hazard Warning:**

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

**Label Precautions:**

None.

**Label First Aid:**

Not applicable.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

No Changes.

**Disclaimer:**

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