



## MATERIAL SAFETY DATA SHEET

NAME OF PRODUCT: Aspartame

MSDS DATE: 12 April, 2012

### Notice

NSF Reference Standards are for test and assay use only and are not intended for human or animal consumption. This document communicates information relating to test and assay use only and may not be applicable for any unauthorized use.

#### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Aspartame  
Catalog Code: RS1-0067  
Synonym: N-L-alpha-Aspartyl-L-phenylalanine; 1-Methyl Ester Succinamic acid; (S)-3-amino-4-((S)-1-methoxy-1-oxo-3-phenylpropan-2-ylamino)-4-oxobutanoic acid  
Chemical Formula:  $C_{14}H_{18}N_2O_5$   
CAS #: 22839-47-0

#### Contact Information:

NSF International  
789 N. Dixboro Road  
Ann Arbor, MI 48113-0140, USA  
Toll Free (USA): 800-NSF-MARK (800-673-6275)  
Telephone: (+1) 734-769-8010  
Fax: (+1) 734-769-0109  
[www.nsf-rs.org](http://www.nsf-rs.org)

#### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Name: Aspartame

CAS#: 22839-47-0

% by Weight: 100%

Toxicological Data on Ingredients: Not Applicable.

#### SECTION 3: HAZARDS IDENTIFICATION

#### Potential Acute Health Effects:

Slightly hazardous in case of skin contact (irritant, permeator), eye contact (irritant), ingestion and inhalation.

#### Potential Chronic Health Effects:

Repeated or prolonged exposure is not known to aggravate medical condition.

CARCINOGENIC EFFECTS: Not Available.



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MUTAGENIC EFFECTS: Not Available.

TERATOGENIC EFFECTS: Not Available.

DEVELOPMENTAL TOXICITY: Not Available.

### SECTION 4: FIRST AID MEASURES

**Eye Contact:**

Check for and remove contact lenses. Flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation occurs.

**Skin Contact:**

In case of contact, immediately wash skin with non-abrasive soap and plenty of water. Cover the irritated skin with an emollient. Seek medical attention if irritation develops.

**Serious Skin Contact:**

Not Available.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. Seek medical attention.

**Serious Inhalation:**

Not Available

**Ingestion:**

Do not induce vomiting. Loosen tight clothing. If large quantities of this material are swallowed call physician immediately.

**Serious Ingestion:**

Not Available.

### SECTION 5: FIRE-FIGHTING MEASURES

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not Available.

Flammable Limits: Not Available.

Flash Points: Not Available

Products of Combustion: These products are carbon oxides (CO, CO<sub>2</sub>) and nitrogen oxides (NO, NO<sub>2</sub>).

Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not Available.

Risks of explosion of the product in presence of static discharge: Not Available.

Special Remarks on Fire Hazards: When heated to decomposition it emits toxic fumes of nitro-oxides.

Material in powder form is capable of creating a dust explosion. As with most organic solids fire is possible at elevated temperatures.

Special Remarks on Explosion Hazards: Fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard.

Fire Fighting Media and Instructions:



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SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

#### Large Spill:

Use appropriate tools to put the material into a suitable waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

### SECTION 7: HANDLING AND STORAGE

#### Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors/dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

#### Storage:

Keep in original container tightly closed in a dry, cool and well-ventilated place.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Engineering Controls:

If laboratory operations generate dust, fume or mist, use local exhaust ventilation or other appropriate engineering controls to keep exposure to airborne contaminants below the exposure limit.

#### Personal Protection:

Safety glasses, lab coat, dust respirator and gloves. Be sure to use an approved/certified respirator or equivalent.

#### Personal Protection in Case of a Large Spill:

Splash goggles, full suit, dust respirator, boots and gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not Available.



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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance: Solid. (Powdered Solid).  
Odor: Not Available.  
Taste: Not Available  
Molecular Weight: 294.30 g/mol  
Color: White.  
pH (1% soln/water): Not Available.  
Boiling Point: Decomposes.  
Melting Point: 248°C (478.4°F)  
Critical Temperature: Not Available.  
Specific Gravity: Not Available.  
Vapor Pressure: Not Applicable.  
Vapor Density: Not Available.  
Volatility: Not Available.  
Odor Threshold: Not Available.  
Water/Oil Dist. Coeff.: Not Available.  
Ionicity (in Water): Not Available.  
Dispersion Properties: Not Available.  
Solubility: Soluble in hot water; partially soluble in cold water.

### SECTION 10: STABILITY AND REACTIVITY

Stability: The product is stable.  
Instability Temperature: Not Available.  
Conditions of Instability: Excess heat, incompatible materials, dust generation.  
Incompatibility with various substances: Reactive with oxidizing agents.  
Corrosivity: Non-corrosive in presence of glass.  
Special Remarks on Reactivity: Not Available.  
Special Remarks on Corrosivity: Not Available.  
Polymerization: Will not occur.

### SECTION 11: TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation and ingestion.

Toxicity to Animals: Acute Oral (LD50): 10,000 mg/kg [Mouse].

Chronic effects on humans: Not Available.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant, permeator),



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ingestion and inhalation.

Special Remarks on Toxicity to Animals: Not Available.

Special Remarks on Chronic Effects on Humans: May cause adverse reproductive effects.

Special Remarks on other Toxic Effects on Humans: Acute Potential Health Effects: Skin: May cause irritation. Eyes: May cause eye irritation. Inhalation: May cause respiratory tract irritation. Ingestion: May cause digestive/gastrointestinal tract irritation/disturbances. May cause headache, fever, dizziness, conjunctivitis, folliculitis, hives, allergic dermatitis, angioedema. Repeated or prolonged ingestion of larger amounts may affect endocrine system, liver, kidneys, brain and weight loss.

### SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not Available.

BOD5 and COD: Not Available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not Available.

### SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### SECTION 14: TRANSPORT INFORMATION

DOT Classification: Not a DOT controlled material in the United States

Identification: Not Applicable.

Special Provisions for Transport: Not Applicable.

### SECTION 15: REGULATORY INFORMATION

Federal and State Regulations: TSCA 8(b) inventory: Aspartame.

Other Regulations: Not Available.

Other Classifications:

EINICS: This product is on the European Inventory of Existing Commercial Chemical Substances (No.245-261-3)



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WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

This product is not classified according to the EU regulations.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves, lab coat, safety glasses and dust respirator. Be sure to use an approved/certified respirator or equivalent when ventilation is inadequate.

### SECTION 16: OTHER INFORMATION

References: Not Available.

Other Special Considerations: Not Available.

### DISCLAIMER:

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