L-GLUTAMIC ACID, SODIUM SALT

1. Product Identification And Company Information

Chemical Name: L-Glutamic acid, monosodium salt
Synonyms: Monosodium glutamate; sodium glutamate; MSG, L- (+)-Glutamic acid, monosodium salt, monohydrate.
CAS No.: 142-47-2 (Anhydrous) 6106-04-3 (Monohydrate)
Molecular Weight: 187.13
Chemical Formula: HOOCCH2CH2CH(NH2)COONa-H2O
Supplier:
Qingdao Chemtrade International Technology Co., Ltd.
Add: Rm. 3-201, Building 8, Shijia Garden, No. 93, Xiangjiang Road, Huangdao, Qingdao, Shandong, China 266555
Tel & Fax: +86-532-86893005
Email: chemtrade@trade-chem.com

2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No</th>
<th>Percent</th>
<th>Hazardous</th>
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<tbody>
<tr>
<td>L-Glutamic Acid, Sodium Salt</td>
<td>142-47-2</td>
<td>90-100%</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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\textsuperscript{(TM)} Ratings (Provided here for your convenience)

Health Rating: 0 - None
Flammability Rating: 1 - Slight
Potential Health Effects

Inhalation:
May cause irritation of respiratory tract

Ingestion:
Large doses may cause gastro-intestinal upset.

Skin Contact:
May cause allergic skin reaction

Eye Contact:
Avoid contact with eyes

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.

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.

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.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Protect from freezing. Avoid dust formation and control ignition sources. Employ grounding, venting and explosion relief provisions in accord with accepted engineering practices in any process capable of generating dust and/or static electricity. Empty only into inert or non-flammable atmosphere. Emptying contents into a non-inert atmosphere where flammable vapors may be present could cause a flash fire or explosion due to electrostatic discharge.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
None established.

Ventilation System:
Not expected to require any special ventilation. A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):
Not expected to require personal respirator usage. For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible,
a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

**WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**Skin Protection:**
Wear protective gloves and clean body-covering clothing.

**Eye Protection:**
Safety glasses.

9. Physical and Chemical Properties

**Appearance:**
White crystalline powder.

**Odor:**
Nearly odorless.

**Solubility:**
Very soluble in water.

**Specific Gravity:**
No information found.

**pH:**
7.0 (0.2% solution)

**% Volatiles by volume @ 21°C (70°F):**
0

**Boiling Point:**
Not applicable.

**Melting Point:**
232°C (450°F)

**Vapor Density (Air=1):**
No information found.

**Vapor Pressure (mm Hg):**
No information found.

**Evaporation Rate (BuAc=1):**
No information found.

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:
No information found.

11. Toxicological Information

Investigated as a mutagen and reproductive effector. Oral rat LD50 16,600 mg/kg.

--- NTP Carcinogen ---

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<tr>
<th>Ingredient</th>
<th>Known</th>
<th>Anticipated</th>
<th>IARC</th>
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<td>L-Glutamic Acid, Sodium Salt</td>
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<td>None</td>
</tr>
<tr>
<td>(142-47-2)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Ecological Information

Environmental Pate:
Volatilization, adsorption and bioconcentration are not expected to be important environmental fate processes. When released to the air, this material is expected to remain in the particulate phase. When released into the air, this material is not expected to be degraded by photolysis. When released into the air, this material is expected to be readily removed from the atmosphere by dry and wet deposition.

Environmental Toxicity:
No information found.

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.
14. Transport Information

Not regulated.

15. Regulatory Information

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Chemical Inventory Status - Part 1

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<th>Ingredient</th>
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<th>EC</th>
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Chemical Inventory Status - Part 2

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Federal, State & International Regulations - Part 1

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<th>RQ</th>
<th>TPQ</th>
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<th>Chemical Catg.</th>
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Federal, State & International Regulations - Part 2

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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.

16. Other Information

NFPA Ratings: Health: 0 Flammability: 0 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:
MSDS Section(s) changed since last revision of document include: 3.
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