

**MATERIAL SAFETY DATA SHEET**

MONOSODIUM L-GLUTAMATE MONOHYDRATE  
(MONOSODIUM GLUTAMATE)

AJINOMOTO CO., (THAILAND) LTD.  
487/1 Si Ayutthaya Road,  
Khwaeng Thanon Phayathai,  
Khet Ratchathewi, Bangkok 10400, Thailand  
Tel.: 66 (2) 247-7000; Fax: 66 (2) 247-5617

**1. PRODUCT AND PRODUCT INFORMATION**

**Product Name:** Monosodium L-glutamate monohydrate (Monosodium glutamate), MSG  
**Synonyms:** Sodium hydrogen L-glutamate, Sodium L-glutamate  
**Chemical Formula:**  $\text{HOOC-CH(CH}_2\text{-CH}_2\text{-COONa).H}_2\text{O}$   
 $\begin{array}{c} | \\ \text{NH}_2 \end{array}$   
**CAS Number:** 6106-04-03

**2. INFORMATION ON CONSTITUENTS**

**Purity:** Not less than 99.0% of  $\text{C}_5\text{H}_8\text{NNaO}_4\cdot\text{H}_2\text{O}$  on the dried basis.  
**Content in**  
**Sodium (Na):** 12.29% (theoretical)  
**Nitrogen (N):** 7.48% (theoretical)  
**Glutamic acid equivalent:** 78.62%

**3. HAZARD IDENTIFICATION**

**Potential Acute Health Effects:** Hazardous in case of eye contact (irritant). Slightly hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.  
**Potential Chronic Health Effects:** Not available

**4. FIRST AID MEASURES**

**Eye contact:** Immediately wash eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention immediately.  
**Skin contact:** Wash with plenty of water.  
**Inhalation:** Move the victim to a well ventilated area. Get medical attention immediately.  
**Ingestion:** Treat all symptoms. Get medical attention immediately.

**5. FIRE AND EXPLOSION DATA**

**Flammability of the product:** May be combustible at high temperature.  
**Auto-ignition temperature:** Not available.  
**Flash points:** Not available.  
**Flammable limits:** Not available.  
**Protection against fire and explosion:** Negligible fire hazard when exposed to heat or flame. No risk of explosion.  
**Suitable fire extinguisher media:** Foam, carbon dioxide or water spray.  
**Special explosion hazards:** Not available.

**6. ACCIDENTAL RELEASE MEASURES**

**Product in its solid form:** Take up with sand or other absorbent material and place into containers for later disposal.  
**Product in its solution form:** Use appropriate tool to put the spill into containers for later disposal.

**MATERIAL SAFETY DATA SHEET**MONOSODIUM L-GLUTAMATE MONOHYDRATE  
(MONOSODIUM GLUTAMATE)AJINOMOTO CO., (THAILAND) LTD.  
487/1 Si Ayutthaya Road,  
Khwaeng Thanon Phayathai,  
Khet Ratchathewi, Bangkok 10400, Thailand  
Tel.: 66 (2) 247-7000; Fax: 66 (2) 247-5617**7. HANDLING AND STORAGE**

Storage at normal temperature, in a dry place. Keep container tightly closed, away from aromatic materials.

**8. PROTECTIVE EQUIPMENT MEASURES****Industrial hygiene****Ventilation:** As for any material which may generate dusts during handling or mixing, provide local mechanical exhaust or general dilution system.**Personal protection****Respirator:** Not necessary if appropriate ventilation of the local is supplied.  
If high levels of dusts are generated, paper masks or self-contained breathing apparatus.**Hands and body:** No particular clothing.**Eyes:** Not necessary if appropriate ventilation of the local is supplied.  
If high levels of dusts are generated, dust-resistant goggles advised.**9. PHYSICAL AND CHEMICAL PROPERTIES****Physical status at 25°C:** Crystals.  
**Color:** White.  
**Odor:** Odorless.  
**Taste:** Characteristic taste.  
**Molecular Weight:** 187.13  
**Melting point (°C):** Crystallized amino acids have a fairly high melting or decomposition temperature, usually above 200°C.  
**Solubility in water:** Very soluble (up to 60 - 65 g/100ml water at 20-25 °C).  
**Solubility in alcohol:** Sparingly soluble.  
**pH of aqueous solution:** 6.7 to 7.2  
(at 1 in 50 soln)**10. STABILITY AND REACTIVITY**

This product is stable under normal condition of use.

**Thermal decomposition:** None.**Hazardous reactions:** None.**Hazardous decomposition products:** None.**11. ABSENCE OF ACUTE TOXICITY IN MONOSODIUM L-GLUTAMATE**

Categorized as GRAS (Generally Recognized as Safe) status by the Food &amp; Drug Administration in USA.

Categorized as "ADI (Acceptable Daily Intake) not specified" in the following authorities:

- Joint FAO/WHO Expert Committee on Food Additives, 31<sup>st</sup> report, Geneva, 1987 Technical Report Series No. 759
- Commission of the European Communities, Scientific Committee for Food (Twenty-fifth series)

**MATERIAL SAFETY DATA SHEET**MONOSODIUM L-GLUTAMATE MONOHYDRATE  
(MONOSODIUM GLUTAMATE)AJINOMOTO CO., (THAILAND) LTD.  
487/1 Si Ayutthaya Road,  
Khwaeng Thanon Phayathai,  
Khet Ratchathewi, Bangkok 10400, Thailand  
Tel.: 66 (2) 247-7000; Fax: 66 (2) 247-5617**12. ECOLOGICAL INFORMATION****Not alleged to be toxic****Persistence and degradation:** Biodegradable**Potential for bio-accumulation:** None**13. DISPOSAL****Waste disposal:** Disposal in accordance with the local/national regulations in force.**14. TRANSPORTATION****UN number:** Not applicable**Sea:** Not applicable**Road/rail:** Not applicable**Air:** Not applicable**15. REGULATORY INFORMATION****General remarks:** Monosodium L-glutamate (food grade) is permitted as food additive and is categorized as "flavor enhancer" by Codex Alimentarius and the European Parliament and the Council of the European Union.**16. OTHER INFORMATION**

The information above is believed to be accurate and represents the best information currently available to us. However, the accuracy or completeness of this information and any of recommendation or suggestions are made without warranty or guarantee. Since the conditions of use are beyond the control of our company, it is the responsibility of the user to determine the conditions of safe use of this preparation. The information in this sheet does not represent analytical specifications, for which please refer to our Product Specification.

**DISCLAIMER OF RESPONSIBILITY**

The information contained in that sheet was provided by what are deemed to be reliable sources. Nonetheless, their accuracy is neither expressly nor tacitly warranted. Conditions or methods of handling, storage, use or disposal are beyond our control and are not within our domain.

We are therefore not liability for losses, damage or costs incurred by or related to the handling, storage, use or disposal of the product.

This safety data sheet was written for and should be used for that product only. Should this product be used as a constituent of an other product, the above information does not apply.