

Material Safety Data Sheet (MSDS)

Product Name: Monosodium Glutamate

MSDS Generate Date: 20-05-2017

Revision Date: 30-12-2024

Supplier:

Rawpharma Biz Pvt Ltd

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1. Identification of the Substance/Preparation and Company

Product Name: Monosodium Glutamate

Synonyms: MSG, Sodium Glutamate, Glutamic Acid Monosodium Salt

Chemical Formula: $C_5H_8NO_4Na$

Molecular Weight: 187.13 g/mol

CAS No.: 142-47-2

2. Hazard Identification

Classification: Not classified as hazardous under GHS.

Label Elements:

- **Pictogram:** None required
- **Signal Word:** None
- **Hazard Statements:** Not hazardous under normal conditions of use.

- **Precautionary Statements:** Avoid inhalation of dust. Avoid contact with eyes. Use with adequate ventilation.

Potential Health Effects:

- **Inhalation:** May cause mild irritation to the respiratory tract.
- **Skin Contact:** Non-irritant under normal use.
- **Eye Contact:** May cause slight irritation.
- **Ingestion:** Safe in food-grade quantities; excessive intake may cause headache, nausea, or flushing ("MSG symptom complex").

3. Composition / Information on Ingredients

Monosodium Glutamate (International Chemical Identification: Sodium 2-aminopentanedioate)

CAS Number: 142-47-2

Purity: Not less than 99% (Food Grade)

This product contains only Monosodium Glutamate as an active ingredient, without any hazardous additives or impurities.

4. First Aid Measures

Inhalation: Move to fresh air. Seek medical attention if irritation persists.

Skin Contact: Wash with soap and water.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses if present.

Ingestion: Rinse mouth with water. If large quantities are ingested, seek medical advice.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Water spray, foam, dry chemical, or CO₂.

Specific Hazards: Product is non-flammable; however, thermal decomposition may release nitrogen oxides (NO_x) and carbon oxides (CO, CO₂).

Protective Equipment: Firefighters should wear protective clothing and self-contained breathing apparatus.

6. Accidental Release Measures

Personal Precautions: Avoid dust formation. Use protective mask and gloves.

Environmental Precautions: Avoid release into drains or waterways.

Methods for Clean-Up: Sweep up and collect in suitable container for disposal. Avoid generating dust.

7. Handling and Storage

Handling: Handle in accordance with good industrial hygiene. Avoid dust inhalation.

Storage: Store in a cool, dry, well-ventilated place. Keep container tightly closed. Protect from moisture and heat.

8. Exposure Controls / Personal Protection

Exposure Limits: Not established for food-grade MSG.

Engineering Controls: Ensure good ventilation.

Personal Protection:

- **Respiratory Protection:** Dust mask recommended.
 - **Eye Protection:** Safety goggles.
 - **Skin Protection:** Gloves and protective clothing.
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9. Physical and Chemical Properties

Monosodium Glutamate appears as a white crystalline powder with no characteristic odor and a distinct umami taste. It has a pH value between 6.7 and 7.2 in a 1% aqueous solution. The substance decomposes above 232°C and is highly soluble in water. The material is non-flammable and non-volatile. Its density is approximately 1.62 g/cm³, and it does not have a defined boiling point due to decomposition before boiling. The flash point is not applicable as the product is non-combustible.

10. Stability and Reactivity

Stability: Stable under normal storage and use conditions.

Incompatible Materials: Strong oxidizing agents.

Decomposition Products: CO, CO₂, NO_x under high temperatures.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

Acute Toxicity:

- **Oral (rat):** LD₅₀ = 15,000 mg/kg (non-toxic)

Skin & Eye Irritation: Slight, non-corrosive.

Chronic Effects: No evidence of mutagenicity, carcinogenicity, or reproductive toxicity.

Target Organs: None known under normal use.

Note: MSG is generally recognized as safe (GRAS) by the U.S. FDA.

12. Ecological Information

Ecotoxicity: Not harmful to aquatic life.

Persistence and Degradability: Biodegradable.

Bioaccumulation: Not expected to bioaccumulate.

Mobility in Soil: High solubility; may migrate in aqueous systems.

13. Disposal Considerations

Dispose of in accordance with local regulations. Non-hazardous waste. Avoid discharge into waterways.

14. Transport Information (Detailed Toxicological & Safety Data)

UN Number: Not regulated.

UN Proper Shipping Name: Monosodium Glutamate

Transport Hazard Class: Non-hazardous for transport.

Packing Group: Not applicable.

Environmental Hazards: None.

Transport in Bulk (IMDG/IMO, ICAO/IATA, ADR/RID): Not classified as dangerous goods.

Detailed Toxicological & Exposure Data:

- **Inhalation Exposure:** High airborne concentrations ($>10 \text{ mg/m}^3$) may cause mild mucous membrane irritation. No systemic toxicity observed.
- **Ingestion Exposure:** Acute oral toxicity very low. Human consumption up to 3 g/day considered safe. Excess intake (above 6 g) may cause transient effects: headache, flushing, sweating, facial pressure, and chest tightness (known as “MSG Symptom Complex”).
- **Skin Exposure:** Non-sensitizing; prolonged contact may cause mild dryness.
- **Eye Exposure:** Mild transient irritation possible due to particulate matter.
- **Carcinogenicity:** Not listed as a carcinogen by IARC, OSHA, or NTP.
- **Mutagenicity / Teratogenicity:** Negative in standard mutagenicity tests.
- **Chronic Toxicity:** No adverse long-term effects reported in animal or human studies.
- **Occupational Exposure Limits:** None established by OSHA or ACGIH.
- **Overall Assessment:** Product is considered physiologically harmless and safe for food and industrial applications when handled properly.

15. Regulatory Information

U.S. FDA: GRAS (Generally Recognized as Safe)

EU Classification: Not hazardous under Regulation (EC) No. 1272/2008.

India: Not classified as hazardous under ISI or Factories Act.

16. Other Information

Disclaimer:

This MSDS is provided for information only and applies to the material as supplied. The information is based on data believed to be accurate but does not constitute a guarantee. Users are responsible for ensuring safe working conditions and compliance with applicable regulations.

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- **Website:** www.rawpharmabiz.com
- MSDS are based on the manufacturer's provided information.