

# Monosodium Glutamate MSDS

## Product Name and Identification

**Product Name:** [Monosodium Glutamate \(MSG\)](#)

**Chemical Formula:** C<sub>5</sub>H<sub>8</sub>NO<sub>4</sub>Na

**CAS Number:** 142-47-2

**Intended Use:** Commonly used as a flavor enhancer in food products and occasionally in industrial applications.

## Composition/Ingredients

### Chemical Composition:

- **Substance Name:** Monosodium L-Glutamate
- **Purity:** ≥ 99%
- **Hazardous Components:** Not classified as hazardous under current regulatory guidelines.

## Hazards Identification

### Emergency Overview:

- **Physical Hazards:**
  - No significant physical hazards under standard conditions.
- **Health Hazards:**
  - May cause mild irritation to the eyes and skin.
  - Large amounts, if inhaled as dust, may result in respiratory discomfort.
- **Environmental Hazards:**
  - Not classified as environmentally hazardous; avoid release in large quantities into water sources.

### Precautionary Statements:

- Prevent dust generation.
- Avoid prolonged exposure to skin and eyes.
- Use appropriate personal protective equipment (PPE).

## First Aid Measures

### Eye Contact:

- Immediately rinse eyes with plenty of water for at least 15 minutes. If irritation persists, seek medical attention.

**Skin Contact:**

- Wash skin thoroughly with soap and water. Remove contaminated clothing and rinse affected areas. Seek medical advice if irritation develops.

**Inhalation:**

- Move the exposed person to fresh air. If breathing difficulties occur, seek medical assistance.

**Ingestion:**

- Rinse mouth with water. If large amounts have been ingested, drink plenty of water to dilute and consult a physician if symptoms persist.

## Handling and Storage

**Handling:**

- Avoid creating or inhaling dust. Handle with adequate ventilation.
- Wash hands after handling. Avoid contact with eyes and skin.

**Storage:**

- Store in a cool, dry place away from moisture.
- Keep containers tightly closed when not in use to avoid contamination.

## Exposure Controls/Personal Protection

**Exposure Limits:**

- No specific exposure limits established, but avoid excessive inhalation of dust.

**Engineering Controls:**

- Use local exhaust ventilation or adequate general ventilation to reduce dust levels in the air.

**Personal Protective Equipment (PPE):**

- **Eye Protection:** Safety goggles for dusty conditions.
- **Skin Protection:** Wear appropriate gloves if handling large quantities.

- **Respiratory Protection:** Wear a dust mask or respirator in areas with poor ventilation.

## Physical and Chemical Properties

- **Appearance:** White, crystalline powder
- **Odor:** Odorless
- **Melting Point:** Decomposes above 200°C
- **Boiling Point:** Not applicable
- **Flash Point:** Non-flammable
- **Solubility:** Highly soluble in water; insoluble in organic solvents
- **Vapor Pressure:** Negligible at standard conditions
- **Density:** Approximately 1.62 g/cm<sup>3</sup>

## Stability and Reactivity

### Chemical Stability:

- Stable under normal storage and handling conditions.

### Reactivity:

- Non-reactive under normal conditions.

### Conditions to Avoid:

- Avoid exposure to moisture and high temperatures that may cause clumping or degradation.

### Hazardous Decomposition Products:

- When exposed to fire, may produce carbon monoxide, carbon dioxide, and nitrogen oxides.

## Toxicological Information

- **Acute Toxicity:**
  - No serious acute effects reported under standard exposure conditions.
  - LD50 (oral, rat): >15,000 mg/kg.
- **Skin/Eye Irritation:**
  - May cause mild irritation during prolonged exposure.
- **Chronic Effects:**
  - No known chronic effects at normal exposure levels.

## Disposal Considerations

- Dispose of in accordance with local, regional, and national regulations.
- Avoid discharging significant quantities into waterways or sewer systems as this may affect water pH.
- Contaminated packaging should be cleaned thoroughly before disposal or recycling.

**Note:** This document provides safety guidance based on current knowledge and is intended for safe handling and use. Always refer to specific regional regulations to ensure proper compliance.