

# Glutathione MSDS

## 1. Product Name and Identification

**Product Name:** [Glutathione](#)

**Synonyms:** GSH, Gamma-L-Glutamyl-L-cysteinylglycine

**CAS Number:** 70-18-8

**Recommended Uses:** Antioxidant, Pharmaceutical and dietary applications, Cosmetics ingredient

**Manufacturer/Distributor Details:**

- **Name:** [Insert Manufacturer/Distributor Name]
  - **Address:** [Insert Address]
  - **Emergency Contact Number:** [Insert Contact Number]
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## 2. Composition/Ingredients

**Substance/Preparation:** Substance

**Chemical Name:** Glutathione

**CAS Number:** 70-18-8

**Percent Composition:**  $\geq 99\%$

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## 3. Hazards Identification

**Classification of the Substance or Mixture:**

- Not classified as hazardous according to GHS standards.

**Hazard Statements:**

- Generally regarded as safe (GRAS) under normal handling conditions.
- May cause mild irritation to skin, eyes, or respiratory tract if exposed to excessive dust or fine particles.

**Precautionary Statements:**

- Avoid breathing dust, and contact with eyes or skin.
- Practice good industrial hygiene measures when handling.

**Pictograms:**

- Not applicable (non-hazardous).

**Additional Notes:** While Glutathione is non-toxic, excessive exposure to fine particulates may cause minor respiratory irritation.

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## 4. First Aid Measures

**General Information:** Exposure to Glutathione is not typically expected to require medical attention. However, treat symptoms if present.

**Eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if applicable and easy to do. Seek medical advice if irritation persists.

**Skin:** Wash exposed skin with water and soap. If irritation develops and persists, seek medical advice.

**Inhalation:** Move to fresh air in case of accidental inhalation of dust. If respiratory irritation occurs, seek medical attention.

**Ingestion:** Rinse mouth with water. If large quantities are ingested and symptoms develop, seek medical assistance.

**Important Notes for Physicians:** Treat symptoms. There are no known severe medical risks associated with exposure to Glutathione.

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## 5. Handling and Storage

### Handling:

- Handle in well-ventilated environments to minimize dust accumulation.
- Avoid contact with eyes, skin, and clothing.
- Wash hands thoroughly after handling.

### Storage:

- Store in a cool, dry, and light-protected environment.
  - Keep container tightly closed when not in use.
  - Store away from strong oxidizing agents and moisture.
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## 6. Exposure Controls/Personal Protection

### Engineering Controls:

- Use local or general exhaust ventilation to minimize airborne particulate levels.

### Personal Protection Equipment (PPE):

- **Eye Protection:** Safety glasses or goggles in environments with significant dust or fine particles.
- **Skin Protection:** Wear gloves to reduce risk of skin contact, particularly in bulk handling.
- **Respiratory Protection:** Use a dust mask in areas where the material is airborne or where ventilation is insufficient.
- **Other:** Protective clothing to minimize skin exposure as needed.

### Hygiene Measures:

- Wash hands and other exposed areas thoroughly after use. Do not eat, drink, or smoke when handling this product.

### Recommended Workplace Exposure Standards:

- No specific exposure limits established. Handle dust with caution.
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## 7. Physical and Chemical Properties

- **Appearance:** White crystalline powder
  - **Odor:** Odorless
  - **Melting Point:** Approximately 195°C (with decomposition)
  - **Boiling Point:** Not applicable
  - **Solubility:** Soluble in water (~1g/5mL)
  - **Density:** Approx. 1.4 g/cm<sup>3</sup>
  - **pH:** 3.0 - 4.0 (10% solution in water)
  - **Molecular Formula:** C<sub>10</sub>H<sub>17</sub>N<sub>3</sub>O<sub>6</sub>S
  - **Molecular Weight:** 307.32 g/mol
  - **Flash Point:** Non-flammable
  - **Vapor Pressure:** Not applicable
  - **Auto-Ignition Temperature:** Not applicable
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## 8. Stability and Reactivity

**Chemical Stability:** Stable under normal conditions of handling and storage.

**Conditions to Avoid:** Excessive heat, moisture, and exposure to light.

**Materials to Avoid:** Strong oxidizing agents, strong acids and bases.

**Hazardous Decomposition Products:** Thermal decomposition may release oxides of carbon, nitrogen, and sulfur.

**Polymerization:** Will not occur under normal conditions.

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## 9. Toxicological Information

**Acute Toxicity:**

- Oral LD50 (Rat): > 5000 mg/kg (low toxicity)

**Skin Corrosion/Irritation:** No significant irritation expected.

**Eye Damage/Irritation:** May cause mild mechanical irritation in case of direct contact with powder.

**Respiratory Effects:** Dust inhalation may cause minor respiratory irritation, including coughing or sneezing.

**Chronic Effects:** No known chronic health effects under normal handling conditions.

**Carcinogenicity:** Glutathione is not classified as a carcinogen by IARC, NTP, or OSHA.

**Other Information:** Generally recognized as safe (GRAS) by regulatory authorities when used as intended.

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## 10. Disposal Considerations

**Waste Disposal Methods:**

- Dispose of according to local, regional, and national regulations.
- Avoid release to waterways or storm drains to minimize environmental impact.

**Packaging Disposal:**

- Completely empty containers should be cleaned before recycling or disposal.

**Environmental Precautions:** Glutathione is not classified as hazardous to the environment. However, avoid releasing large quantities directly into waterways.

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