

Calcium Gluconate MSDS (Material Safety Data Sheet)

Section 1: Product Name and Identification

- **Product Name:** [Calcium Gluconate](#)
- **Chemical Name:** Calcium D-gluconate
- **Synonyms:** Gluconic Acid Calcium Salt
- **CAS Number:** 299-28-5
- **Use of Product:** Pharmaceutical applications, calcium supplement, industrial additive

Section 2: Composition/Ingredients

- **Chemical Composition:**
 - Calcium Gluconate - $\geq 98\%$
- **Molecular Formula:** C₁₂H₂₂CaO₁₄
- **Molecular Weight:** 430.37 g/mol
- **Impurities or Additives:** May contain trace amounts of water

Section 3: Hazards Identification

- **GHS Classification:** Not classified as hazardous under GHS standards.
- **Hazard Statements:**
 - Non-hazardous when used as directed.
- **Precautionary Statements:**
 - Avoid inhalation of powder or direct contact with eyes.
 - Maintain proper ventilation in handling areas.

Section 4: First Aid Measures

- **Eye Contact:** Rinse cautiously with water for several minutes. Seek medical advice if irritation persists.
- **Skin Contact:** Wash thoroughly with soap and water. If irritation occurs, consult a doctor.
- **Inhalation:** Move to fresh air. Seek medical attention if breathing becomes difficult.
- **Ingestion:** Rinse mouth with water. Drink small amounts of water to dilute. If symptoms appear, seek medical advice.

Section 5: Handling and Storage

- **Handling:**
 - Handle in accordance with good industrial hygiene.

- Minimize dust formation. Avoid inhalation of dust.
- **Storage:**
 - Store in a cool, dry place away from moisture and direct sunlight.
 - Keep container tightly sealed when not in use.

Section 6: Exposure Controls/Personal Protection

- **Exposure Limits:** No occupational exposure limits established.
- **Engineering Controls:**
 - Use in well-ventilated areas or with appropriate local exhaust ventilation.
- **Personal Protective Equipment (PPE):**
 - **Eye Protection:** Safety goggles if there is a risk of eye contact.
 - **Hand Protection:** Protective gloves when handling.
 - **Skin Protection:** Wear suitable protective clothing to prevent extended contact.
 - **Respiratory Protection:** Use a dust mask in poorly ventilated areas or if dust may be generated.

Section 7: Physical and Chemical Properties

- **Appearance:** White to off-white powder or crystalline solid
- **Odor:** Odorless
- **Melting Point:** Decomposes before melting
- **Boiling Point:** Not applicable
- **Solubility:** Soluble in water (3.5 g/100 mL at 20°C)
- **pH:** 6-8 (10% aqueous solution)
- **Flashpoint:** Not applicable
- **Density:** Approximately 2.0 g/cm³
- **Vapor Pressure:** Not applicable
- **Auto-ignition Temperature:** Not determined

Section 8: Stability and Reactivity

- **Stability:** Stable under recommended storage conditions.
- **Conditions to Avoid:** Excessive heat, exposure to moist air or water.
- **Materials to Avoid:** Strong acids and strong oxidizing agents.
- **Hazardous Decomposition Products:** May release carbon oxides and calcium oxides upon decomposition.

Section 9: Toxicological Information

- **Routes of Exposure:** Skin contact, eye contact, inhalation, ingestion.
- **Acute Toxicity:**
 - LD50 (Oral - Rat): 10,000 mg/kg (estimated, low toxicity).

- **Chronic Exposure:** Prolonged or excessive ingestion may lead to imbalance in calcium levels.
- **Symptoms of Overexposure:** Mild irritation to the respiratory tract (dust), potential gastrointestinal discomfort when ingested in large amounts.
- **Carcinogenicity:** Not classified as carcinogenic by IARC, OSHA, or NTP.
- **Reproductive Effects:** No adverse effects known when used as directed.

Section 10: Disposal Considerations

- **Waste Disposal:**
 - Dispose of in accordance with local, state, and federal regulations.
 - Avoid disposal into sewage or natural waterways.
- **Container Disposal:**
 - Rinse containers thoroughly before recycling or disposal. Ensure disposal complies with applicable regulations.