

Material Safety Data Sheet (MSDS)

Product Name: Precipitated Silicon Dioxide Food Grade

MSDS Generate Date: 20-05-2017

Revision Date: 30-12-2024

Supplier:

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1. Identification of the Substance/Preparation and Company

- **Product Name:** Precipitated Silicon Dioxide (Food Grade)
- **Synonyms:** Synthetic Amorphous Silica, E551
- **Recommended Use:** Food additive (anti-caking agent, stabilizer, carrier, thickener)

2. Hazards Identification

- **Classification (GHS):** Not classified as hazardous.
- **Primary Hazards:** May cause mild mechanical irritation to eyes, skin, and respiratory tract due to dust.
- **Signal Word:** None required.
- **Pictogram:** None.
- **Hazard Statements:**

- Dust may cause temporary discomfort to eyes and lungs.
 - **Precautionary Statements:**
 - Avoid dust generation.
 - Use with adequate ventilation.
 - Wear protective glasses and dust mask if exposure is likely.
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3. Composition / Information on Ingredients

- **Chemical Name:** Silicon Dioxide (SiO₂, amorphous)
 - **CAS Number:** 7631-86-9
 - **EINECS Number:** 231-545-4
 - **Content:** ≥ 99% (Food Grade Purity)
 - **Impurities:** Not hazardous under normal use.
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4. First Aid Measures

- **Inhalation:** Move to fresh air. If breathing difficulty occurs, seek medical attention.
 - **Skin Contact:** Wash with soap and water. No serious effects expected.
 - **Eye Contact:** Rinse with plenty of water. Seek medical attention if irritation persists.
 - **Ingestion:** Non-toxic, but if large amounts are swallowed, rinse mouth and seek medical advice.
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5. Fire Fighting Measures

- **Flammability:** Non-flammable.
 - **Suitable Extinguishing Media:** Use extinguishing media suitable for surrounding materials.
 - **Protective Equipment for Firefighters:** Wear self-contained breathing apparatus in case of surrounding fire.
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6. Accidental Release Measures

- **Personal Precautions:** Avoid dust inhalation; wear mask and goggles.
 - **Environmental Precautions:** Prevent large quantities from entering waterways.
 - **Clean-up Methods:** Sweep up and place in suitable containers. Avoid dust generation.
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7. Handling and Storage

- **Handling:** Avoid creating dust. Use local exhaust ventilation if dust forms.
 - **Storage:** Store in tightly closed bags/containers in a cool, dry, and well-ventilated place.
 - **Incompatibilities:** None significant.
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8. Exposure Controls / Personal Protection

- **Occupational Exposure Limits (OEL):**
 - OSHA PEL (TWA): 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).
 - **Engineering Controls:** Provide adequate ventilation.
 - **Personal Protective Equipment (PPE):**
 - **Respiratory Protection:** Dust mask if airborne dust is present.
 - **Eye Protection:** Safety goggles.
 - **Skin Protection:** Normal work clothing and gloves.
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9. Physical and Chemical Properties

- **Appearance:** White, fine amorphous powder
- **Odor:** Odorless
- **pH (suspension, 10%):** 6.0 – 8.0
- **Melting Point:** > 1600 °C
- **Solubility:** Insoluble in water

- **Bulk Density:** 40 – 200 g/L (depending on grade)
 - **Boiling Point:** Not applicable
 - **Flammability:** Non-flammable
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10. Stability and Reactivity

- **Stability:** Stable under normal storage and handling conditions.
 - **Reactivity:** Non-reactive under normal use.
 - **Hazardous Decomposition Products:** None under normal conditions.
 - **Incompatible Materials:** Strong acids or bases may affect physical properties but not hazardous.
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11. Toxicological Information

- **Acute Toxicity:** Not toxic.
 - **Irritation:** May cause slight irritation to eyes and respiratory tract due to dust.
 - **Chronic Effects:** No evidence of carcinogenicity or mutagenicity.
 - **LD50 (Oral, rat):** > 5000 mg/kg (practically non-toxic).
 - **Conclusion:** Safe for intended food use.
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12. Ecological Information

- **Ecotoxicity:** No significant ecological hazards.
 - **Persistence and Degradability:** Inorganic, not biodegradable.
 - **Bioaccumulation Potential:** Negligible.
 - **Mobility in Soil:** Immobile; remains in solid form.
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13. Disposal Considerations

- **Waste Disposal Method:** Dispose of in accordance with local, regional, and national regulations.
 - **Packaging Disposal:** Recycle if possible; otherwise dispose as per local guidelines.
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14. Transport Information (Detailed)

- **UN Number:** Not applicable (not regulated).
 - **UN Proper Shipping Name:** Not classified as hazardous for transport.
 - **Transport Hazard Class:** Not regulated.
 - **Packing Group:** Not applicable.
 - **Marine Pollutant:** No.
 - **Special Precautions:** Avoid dust dispersion during transport. Ensure packaging is sealed and dry.
 - **Land Transport (ADR/RID):** Not regulated.
 - **Sea Transport (IMDG):** Not regulated.
 - **Air Transport (IATA/ICAO):** Not regulated.
 - **DOT (US):** Not regulated.
 - **Transport in Bulk (Annex II MARPOL 73/78 & IBC Code):** Not applicable.
 - **Additional Notes:** Precipitated Silicon Dioxide Food Grade is classified as a safe material for transport. Standard labeling as “Non-Hazardous” material is sufficient. Recommended to transport in sealed bags or drums to prevent contamination and moisture exposure.
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15. Regulatory Information

- **Food Additive Status:** Approved as food additive (E551) by FAO/WHO, EU, FDA.
- **Regulatory Compliance:**
 - REACH (EC 1907/2006): Exempt.
 - TSCA (US): Listed.
 - Food Safety Standards: Permitted food additive within prescribed limits.

16. Other Information

- **Abbreviations:**
 - PEL: Permissible Exposure Limit
 - TWA: Time Weighted Average
 - UN: United Nations
- **Disclaimer:** Information provided is believed to be accurate and reliable as of the revision date. The user is responsible for ensuring suitability for specific applications.
- **MSDS Generate Date:** 20-05-2017
- **Revision Date:** 30-12-2024
- **Website:** www.rawpharmabiz.com
- MSDS are based on the manufacturer's provided information.