

MATERIAL SAFETY DATA SHEET (MSDS)

Product Name: Silica Sand

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

- **Chemical Name:** Quartz (SiO_2)
 - **CAS Number:** 14808-60-7
 - **Recommended Use:** Industrial applications, glass manufacturing, foundry, construction, filtration, and abrasives
 - **Company Name:** ATDM Co.
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SECTION 2: HAZARDS IDENTIFICATION

GHS Classification:

- Carcinogenicity (Category 1A)
- Specific Target Organ Toxicity - Repeated Exposure (Category 1, Lungs)

Label Elements:

- **Signal Word:** Danger
- **Hazard Statements:**
 - H350: May cause cancer (inhalation).
 - H372: Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation).

Precautionary Statements:

- P201: Obtain special instructions before use.
 - P260: Do not breathe dust.
 - P270: Do not eat, drink, or smoke when using this product.
 - P280: Wear protective gloves, clothing, eye protection, and face protection.
 - P501: Dispose of contents/container in accordance with local regulations.
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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- **Chemical Name:** Quartz (Silica, Crystalline)
- **CAS Number:** 14808-60-7
- **Composition:** 90-100% Silica (SiO₂)

SECTION 4: FIRST AID MEASURES

- **Inhalation:** Move to fresh air. If breathing is difficult, seek medical attention.
- **Skin Contact:** Wash with soap and water. Seek medical advice if irritation occurs.
- **Eye Contact:** Flush with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.
- **Ingestion:** Rinse mouth and drink plenty of water. Seek medical attention if symptoms occur.

SECTION 5: FIRE-FIGHTING MEASURES

- **Flammability:** Non-flammable
- **Extinguishing Media:** Use any standard fire-fighting medium.
- **Fire Fighting Instructions:** Wear self-contained breathing apparatus if necessary.
- **Hazardous Decomposition Products:** None under normal conditions.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- **Personal Precautions:** Avoid generating dust. Use personal protective equipment.
- **Environmental Precautions:** Avoid contamination of water sources.
- **Cleanup Methods:** Use vacuuming or wet sweeping to minimize dust exposure. Dispose of material per local regulations.

SECTION 7: HANDLING AND STORAGE

- **Handling:** Avoid inhalation of dust. Use local exhaust ventilation.
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- **Storage:** Store in a dry, well-ventilated area. Keep containers closed when not in use.
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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- **Occupational Exposure Limits (OELs):**
 - OSHA PEL: 50 µg/m³ (respirable crystalline silica)
 - ACGIH TLV: 25 µg/m³ (respirable fraction)
 - **Engineering Controls:** Use local exhaust ventilation or dust collection systems.
 - **Personal Protective Equipment (PPE):**
 - **Respiratory Protection:** NIOSH-approved respirators when exposure exceeds limits.
 - **Eye Protection:** Safety goggles or face shield.
 - **Skin Protection:** Protective gloves and clothing.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** White or tan granular solid
 - **Odor:** Odorless
 - **pH:** 6.5 - 7.5
 - **Boiling Point:** Not applicable
 - **Melting Point:** 1710°C (3110°F)
 - **Flash Point:** Not applicable
 - **Solubility in Water:** Insoluble
 - **Density:** 2.65 g/cm³
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SECTION 10: STABILITY AND REACTIVITY

- **Reactivity:** Stable under normal conditions.
 - **Chemical Stability:** Stable under normal temperatures and pressures.
 - **Incompatible Materials:** Hydrofluoric acid.
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- **Hazardous Decomposition Products:** None under normal conditions.
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SECTION 11: TOXICOLOGICAL INFORMATION

- **Routes of Exposure:** Inhalation, skin, and eye contact
 - **Acute Toxicity:** Not acutely toxic
 - **Chronic Effects:** Prolonged inhalation may cause silicosis, lung damage, or lung cancer.
 - **Carcinogenicity:**
 - IARC: Group 1 (Carcinogenic to humans)
 - NTP: Known human carcinogen
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SECTION 12: ECOLOGICAL INFORMATION

- **Environmental Effects:** Non-toxic to aquatic and terrestrial organisms.
 - **Persistence and Degradability:** Non-degradable.
 - **Bioaccumulative Potential:** Does not bioaccumulate.
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SECTION 13: DISPOSAL CONSIDERATIONS

- **Waste Disposal Methods:** Dispose of in accordance with local, regional, and national regulations.
 - **Packaging Disposal:** Follow applicable regulations for container disposal.
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SECTION 14: TRANSPORT INFORMATION

- **DOT Classification:** Not regulated
- **UN Number:** Not applicable
- **Hazard Class:** Not applicable
- **Packing Group:** Not applicable

SECTION 15: REGULATORY INFORMATION

- **OSHA:** Regulated under respirable crystalline silica standards.
 - **TSCA:** Listed on the TSCA inventory.
 - **CERCLA:** Not listed as a hazardous substance.
 - **SARA Title III:** Not listed.
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SECTION 16: OTHER INFORMATION

- **NFPA Rating:**
 - Health: 2
 - Flammability: 0
 - Reactivity: 0
 - **Preparation Date:** 2025.02.26
 - **Prepared By:** ATDM Co.
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