



MATERIAL SAFETY DATA SHEET

Revised/ Reviewed: September 16, 2005

SILEX POWDER

REF 576-71010 (Extra Fine- 1 lbs.) and 576-71030 (Extra-extra-extra Fine- 1 lbs.)

An ingredient in dental porcelain.

Section 1- Product and Company Information

Packaged by: Miltex, Inc.; 589 Davies Drive, York, PA 17402

Information: 717-840-9335, 717-840-9347 (fax)

Chemical Name & Synonyms: Sand, silica sand, quartz, crystalline silica, flint, ground silica

Chemical Formula: SiO₂

Section 2 – Composition/ Information on Ingredients

- Crystalline silica; CAS # 14808-60-7; 99.0 – 99.9%; OSHA PEL (TWA) = (10 mg/m³) / (% SiO₂ +2), ACGIH TLV = 0.05 mg/m³ (respirable).
- Aluminum Oxide; CAS # 1344-28-1; <0.8%
- Iron Oxide; CAS # 1309-37-1; <0.1%
- Titanium Oxide; CAS # 13463-67-7; <0.1%

Section 3 - Health Identification

Potential Health Effects:

Ingestion- No anticipated adverse effects.

Skin Absorption- Will not occur

Eye Contact- May cause abrasion of the cornea

Inhalation- A single exposure will not result in serious adverse health effects. The following chronic effects are possible:

- Can cause silicosis (a fibrosis scarring of the lungs). Silicosis is progressive and may lead to disability and death.
- May increase incidence of scleroderma, connective tissue disorders, lupus, rheumatoid arthritis, chronic kidney diseases, and end-stage kidney diseases.
- Increases risk of tuberculosis.
- May increase incidence of bronchitis and emphysema.

Primary Route(s) of Entry: Inhalation

Carcinogen: NTP Program- Yes, IARC Program- Yes, OSHA Program- No

Medical Conditions Aggravated by Exposure: The condition of individuals with lung disease (for example, bronchitis or emphysema) can be aggravated by exposure.

HMIS Ratings: Health = *; Flammability = 0; Reactivity = 0; PPE = E

Section 4 - First Aid Measures

Eyes: Wash immediately with water. If irritation persists, seek medical attention.

Skin: No anticipated adverse effects.

Ingestion: No anticipated adverse effects.

Inhalation: No specific first aid is necessary since the adverse health effects associated with exposure to the material result from chronic exposure. If there is gross inhalation of the material, remove the person to fresh air, give artificial respiration as needed, and seek medical attention.

Section 5 – Fire Fighting Measures

Not applicable, material is non-flammable, non-combustible, and non-explosive.

Section 6 - Physical and Chemical Properties

Physical State: Solid (fine powder)

Appearance and Odor: White or tan sand (granular, crushed, or ground) with no odor.

Melting Point (°F): 2930

Specific Gravity (H₂O=1): 2.65

Vapor Pressure (mm Hg): Not applicable, does not give off vapors.

Vapor Density (Air=1): Not applicable, does not give off vapors.

Evaporation Rate (butyl acetate=1): Not applicable

Solubility in Water: Insoluble

pH: Not applicable

Section 7 – Stability and Reactivity

Stability: Stable

Conditions to Avoid: None known

Incompatibility/ Materials to Avoid: Strong oxidizing agents such as fluorine, chlorine trifluoride and oxygen difluoride. Contact with such materials may cause fires.

Hazardous Polymerization: Will not occur

Hazardous Decomposition Products: Material will dissolve in hydrofluoric acid and produce the corrosive gas silicon tetrafluoride.

Section 8 – Accidental Release, Disposal, and Ecological Information

Spill Response: Use dustless methods (vacuum) and place into closable container for disposal, or flush with water. Do not dry sweep. Wear protective equipment.

Waste Disposal Method: The material can normally be landfilled; however, it should be covered to minimize generation of airborne dust. Dispose of in accordance with all applicable federal, state, and local regulations.

Ecological, General: Material is not known to be ecotoxic, that is, toxic to birds, fish, invertebrates, microorganisms, or plants.

Section 9 – Exposure Controls/ Personal Protection

Eye Protection: Safety glasses or other appropriate eye wear to prevent eye contact.

Respiratory Protection: If exposure limits are exceeded, a NIOSH-approved respirator.

Ventilation Recommendations: Use sufficient local exhaust to keep level of material below threshold limit.

Skin Protection: Gloves.

Other: --

Section 10 – Storage and Handling

Storage: Avoid creating dust.

Handling: Do not breathe dust. Do not rely on sight to determine if dust is in the air. Material may be in the air without a visible dust cloud. Use adequate ventilation and dust collection. Practice good housekeeping; do not allow dust to collect on walls, floors, sills, ledges, machinery, or equipment. Do not blow clothing off with air, instead wash or vacuum.

Section 11 – Miscellaneous

Toxicological Information: The major concern with the material is silicosis, caused by inhalation and retention of respirable crystalline silica dust. Silicosis can exist in several forms, chronic, accelerated, or acute. Chronic silicosis is the most common form and can occur after many years of exposure to low levels of airborne respirable crystalline silica dust. There is evidence to suggest that exposure to respirable crystalline silica is associated with the increased incidence of autoimmune disorders. Individuals with silicosis are at increased risk to develop pulmonary tuberculosis if exposed to a person with tuberculosis. Several studies suggest that exposure to respirable crystalline silica is associated with the increased incidence of kidney diseases.

Transportation Information: Not a US DOT Hazardous Material

Other: WARNING: Using this product will expose you to a chemical known to the State of California to cause cancer/ birth defects/ other reproductive harm. Mandatory postings and notifications are likely appropriate based on “right-to-know” laws; such laws should be strictly followed.

Liability Disclaimer: MSDS information is provided based on OSHA’s Hazardous Communication Regulation and for use of the persons required to receive this information under this regulation. The information is neither designed nor recommended for any other use or for use by any other person, including compliance with other laws. Miltex does not warrant the suitability for use of this MSDS for any other material or product not specifically identified herein. Miltex does not warrant the accuracy or authenticity of this MSDS unless it has been obtained directly from Miltex or posted or viewed on a Miltex website. This MSDS is based on information that is believed to be reliable, but may be subject to change as new information becomes available. Because it is not possible to anticipate all conditions of use, additional safety precautions may be required. Since the use of this material is not under Miltex’s control, each user is responsible for making their own determination as to the safe and proper handling of this material in their own particular use of this material. Miltex makes no representation or warranty, either express or implied, including as to merchantability or fitness for a particular purpose.