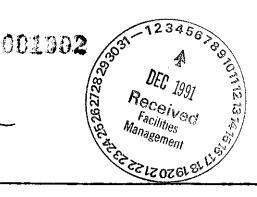


Pennsylvania Glass Sand Corporation

Route 522 North P.O. Box 187 Berkeley Springs, WV 25411 (304) 258-2500 K72473



MATERIAL SAFETY DATA SHEET

TRADE NAME: All silica materials, including MIN-U-SIL, PENN SAND, Q-ROK and SUPERSIL (foregoing Reg. in U.S. Pat. & TM Off.).

FAMILY NAME: Silica sand; quartz; flint; crystalline silica; free silica (a natural mineral extracted from the earth).

CHEMICAL NAME: Silicon Dioxide (SiO₂)

CHEMICAL ABSTRACT SERVICE NO.: 7631-86-9

HAZARDOUS INGREDIENTS:

Silica (Quartz): 99.2% to 99.8% free silica.

PEL = 0.1 mg SiO₂ per cu m. of air Formula: $(10 \text{ mg/m}^3) / (\% \text{SiO}_2 + 2)$

(See OSHA regulations (CFR) Title 29, §1910.1000, Table Z-3 for respirable quartz)

PHYSICAL DATA:

Appearance: Sand — granular, crushed, or ground. No odor or taste.

Color: White or tan Boiling Point: 4,046°F

Specific Gravity: 2.65 (H₂0 = 1)

Insoluble in water.

No vapor pressure, vapor density, percent volatile, or evaporation rates

FIRE AND EXPLOSION HAZARD DATA:

Not flammable.
No flash point.
No fire or explosion hazard.

HEALTH HAZARD DATA:

See Hazardous Ingredients data above. PEL = 0.1 mg SiO₂ per cu m. of air

OVEREXPOSURE EFFECTS:

Harmful if inhaled.

Repeated and prolonged inhalation may cause delayed injury to lungs (silicosis).

Symptoms: Undue breathlessness, cough, sputum production.

Emergency first aid procedures: None

Pannsylvania Glass Sand Corporation

MATERIAL SAFETY DATA SHEET

for

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REACTIVITY DATA:

Stability: Stable

Incompatibility (materials to avoid): Hydrofluoric acid (HF), in which silica will dissolve and produce the corrosive gas silicon tetraflouride (SiF₄).

Hazardous decomposition and hazardous polymerization will not occur.

SPILL OR LEAK PROCEDURES:

Spill Procedures: Use dustless methods - vacuum and place into closable container for disposal, or flush with water. Do not dry sweep. Wear protective equipment specified below.

Waste Disposal Methods: Dispose in accordance with federal, state, and local regulations.

SPECIAL PROTECTION INFORMATION

Ventilation: Use sufficient local exhaust to reduce the dust to the PEL for respirable quartz.

Protective gloves: Optional

Eye protection: Protect from dust particles.

Respiratory protection: Use NIOSH approved dust mask respirator under appropriate OSHA standards and

regulations.

SPECIAL PRECAUTIONS:

Use dustless systems for handling, storage, and clean up so that air borne dust does not exceed the PEL. Use adequate ventilation and dust collection. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Maintain, clean, and test respirators in accordance with OSHA regulations. Maintain and test ventilation and dust collection equipment. Wash clothing which has become dusty; do not beat the dust from the clothing. We recommend that smoking be prohibited in all areas where respirators must be used. WARN YOUR EMPLOYEES (AND YOUR CUSTOMER-USERS IN CASE OF RESALE) BY POSTING AND OTHER MEANS OF THE HAZARD AND OSHA PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT THE OSHA PRECAUTIONS.

ISSUE DATE: April, 1985

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.