



Natural Sand or Gravel

Material Safety Data Sheet

Peckham Industries, Inc.
20 Haarlem Ave.
White Plains, NY 10603

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Emergency Overview

Appearance: Angular or round multicolored particles
Odor: None

WARNING:

Use of natural sand and gravel for construction purposes is not believed to cause additional acute toxic effects. However, repeated overexposures to very high levels of respirable crystalline silica (quartz, cristobalite, tridymite) for periods as short as six months have caused acute silicosis. Acute silicosis is a rapidly progressive, incurable lung disease that is typically fatal. Symptoms include (but are not limited to): shortness of breath, cough, fever, weight loss, and chest pain.

Hazard Rankings

	HMIS	NFPA
Health Hazard	0	0
Fire Hazard	0	0
Flammability	0	0
Reactivity	0	0

Protective Equipment

Minimum Recommended
See Section 8 for Details

This recommendation reflects
minimum PPE.



SECTION 1. PRODUCT IDENTIFICATION

Trade Name: Sand or Gravel **Technical Contact:** (914) 949-2000
Medical Emergency: (800) 424-9300
CAS Number: 14808-60-7 **CHEMTREC Emergency:** (800) 424-9300
(United States Only)
Synonyms: Construction Aggregate

SECTION 2. COMPOSITION

Component Name(s)	CAS Registry No.	Concentration (%)
Natural Sand or Gravel	None	100
- Composition varies naturally; typically contains quartz (crystalline silica)	14808-60-7	> 1

SECTION 3. HAZARDS IDENTIFICATION

Major Route(s) of Entry: Inhalation

Signs and Symptoms of Acute Exposure

- Eye Contact:** Direct contact with dust may cause irritation by mechanical abrasion.
- Skin Contact:** Direct contact may cause irritation by mechanical abrasion. Not expected to be a significant exposure route.
- Inhalation:** Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion. Coughing, sneezing, and shortness of breath may occur following exposures in excess of appropriate exposure limits.
- Ingestion:** Expected to be practically non-toxic. Ingestion of large amounts may cause gastrointestinal irritation and blockage.

Delayed or Other Health Effects

Medical Conditions Aggravated by Exposure:

Inhaling respirable dust and/or crystalline silica may aggravate existing respiratory system disease(s) and/or dysfunctions. Exposure to dust may aggravate existing skin and/or eye conditions.

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SECTION 4. FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid.

Eye Contact: Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or later develops.

Skin Contact: Wash with soap and water. Contact a physician if irritation persists or later develops.

Inhalation: Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops.

Ingestion: If person is conscious, give large quantity of water and induce vomiting; however, never attempt to make an unconscious person drink or vomit. Get immediate medical attention.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point	Not flammable	Flammable Limits in Air	Not flammable
Hazardous Combustion Products	Not applicable	Extinguishing Media	None required
Unusual Fire and Explosion Hazards	Contact with powerful oxidizing agents may cause fire and/or explosions (see Section 10 of this MSDS).		

SECTION 6. ACCIDENTAL RELEASE MEASURES

The personal protection and controls identified in Section 8 of the MSDS should be used as appropriate

Protective Measures Not applicable

Spill Management Spilled material, where dust can be generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Do not dry sweep spilled material.

SECTION 7. HANDLING AND STORAGE

This product is not intended or designed for use as an abrasive blasting medium or for foundry applications, and should not be used for these purposes.

Follow personal protection and controls set forth in Section 8 of this MSDS when handling this product.

Handling Respirable crystalline silica-containing dust may be generated during processing, handling, and storage.

Storage Do not store near food and beverages or smoking materials.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal Protective Equipment



Eye Protection Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated.

Skin Protection See “Hygiene” section below.

Respiratory Protection For respirable quartz levels that exceed or are likely to exceed an 8 hr-TWA of 0.1 mg/m³, a NIOSH approved dust respirator must be worn. For respirable quartz levels that exceed or are likely to exceed an 8hr-TWA of 0.5 mg/m³, a NIOSH approved HEPA filter respirator must be worn. If respirable quartz levels exceed or are likely to exceed an 8 hr-TWA of 5 mg/m³, a NIOSH approved positive pressure, full face respirator or equivalent is required. Respirator use must comply with applicable MSHA or OSHA standards, which include provisions for a user training program, respirator repair and cleaning, respirator fit testing, and other requirements.

Ventilation Local exhaust or general ventilation adequate to maintain exposures below appropriate exposure limits.

Hygiene Wash dust-exposed skin with soap and water before eating, drinking, smoking, and using toilet facilities. Wash work clothes after each use.

Other Control Measures Respirable dust and quartz levels should be monitored regularly. Dust and quartz levels in excess of appropriate exposure limits should be reduced by all feasible engineering controls, including (but not limited to) wet suppression, ventilation, process enclosure, and enclosed employee work stations.

Occupational Exposure Guidelines

When exposure to this product and other chemicals in concurrent, the exposure limit must be defined in the workplace.

Other Particulates: TLV = 10 mg/m³ (inhalable/total particulate, not otherwise classified), TLV = 3 mg/m³ (respirable particulate, not otherwise classified); OSHA PEL = 15 mg/m³ (total particulate, not otherwise regulated), OSHA PEL = 5 mg/m³ (respirable particulate, not otherwise regulated)

Respirable Crystalline Silica (quartz): TLV = 0.05 mg/m³; MSHA and OSHA PEL = 10 mg/m³ ÷ (% SiO₂ + 2); MSHA- and OSHA-Proposed PEL = 0.1 mg/m³

Respirable Dust: MSHA and OSHA PEL = 10 mg/m³ ÷ (% SiO₂ + 2)

Total Dust: MSHA PEL = $30 \text{ mg/m}^3 \div (\% \text{ SiO}_2 + 2)$; OSHA PEL = $30 \text{ mg/m}^3 \div (\% \text{ SiO}_2 + 2)$

ACGIH and OSHA have determined that adverse effects are not likely to occur in the workplace provided exposure levels do not exceed the appropriate TLVs/PELs. However, because of the wide variation in individual susceptibility; lower exposure limits may be appropriate for some individuals including persons with pre-existing medical conditions.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Attention: The data below are typical values and do not constitute a specification.

Appearance: Angular or round, multi-colored particles

Odor: No odor

pH: NA

Vapor Pressure: 0

Vapor Density (Air = 1): NA

Boiling Point: NA

Solubility: Negligible

Melting Point: NA

Specific Gravity: 2.55-2.80 **Viscosity:** NA

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability Stable

Incompatibility With Other Materials

Contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosions. Silica dissolves readily in hydrofluoric acid producing a corrosive gas - silicon tetrafluoride.

Hazardous Decomposition Products

Silica-containing respirable dust particles may be generated by handling.

Hazardous Polymerization Not known to polymerize.

Conditions to Avoid: Avoid contact with incompatible materials (see above).

SECTION 11. TOXICOLOGICAL INFORMATION

Chronic Toxicity

Prolonged and repeated inhalation of respirable crystalline silica-containing dust in excess of appropriate exposure limits has caused silicosis, a lung disease. Not all individuals with silicosis will exhibit symptoms (signs) of the disease. However, silicosis can be progressive, and symptoms can appear at any time, even years after exposure has ceased. Symptoms of silicosis may include, but are not limited to, the following: shortness of breath; difficulty breathing with or without exertion; coughing; diminished work capacity; diminished chest expansion; reduction of lung volume; right heart enlargement and/or failure. Smoking may increase the risk of developing lung disorders, including emphysema and lung cancer. Persons with silicosis have an increased risk of pulmonary tuberculosis infection.

Respirable dust containing newly broken silica particles has been shown to be more hazardous to animals in laboratory tests than respirable dust containing older silica particles of similar size. Respirable silica particles which had aged for sixty days or more showed less lung injury in animals than equal exposures of respirable dust containing newly broken particles of silica.

There are reports in the literature suggesting that excessive crystalline silica exposure may be associated with adverse health effects involving the kidney, scleroderma (thickening of the skin caused by swelling and thickening of fibrous tissue) and other autoimmune disorders. However, this evidence has been obtained primarily from case reports involving individuals working in high exposure situations or those who have already developed silicosis; and therefore, this evidence does not conclusively prove a causal relationship between silica or silicosis and these adverse health effects. Several studies of persons with silicosis also indicate an increased risk of developing lung cancer, a risk that increases with the duration of exposure. Many of these studies of silicotics do not account for lung cancer confounders, especially smoking.

Sand or gravel is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). In October 1996, an IARC Working Group re-assessing crystalline silica, a component of this product, designated respirable crystalline silica as carcinogenic (Group 1). The NTP's Report on Carcinogens, 9th edition, lists respirable crystalline silica as a "known human carcinogen." In year 2000, the American Conference of Governmental Industrial Hygienists (ACGIH) listed respirable crystalline silica (quartz) as a suspected human carcinogen (A-2). These classifications are based on sufficient evidence of carcinogenicity in certain experimental animals and on selected epidemiological studies of workers exposed to crystalline silica.

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY

No specific data on this product. Not expected to be toxic to aquatic organisms.

ENVIRONMENTAL FATE

No specific data on this product.

SECTION 13. DISPOSAL CONSIDERATIONS

Pickup and reuse clean materials. Dispose of waste materials only in accordance with applicable federal, state, and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside the United States.

DOT Shipping Name: Label as required by the OSHA Hazard Communication Standard [29 CFR 1910.1200 (f)] and applicable state and local laws and regulations.

DOT Hazard Class: None

DOT Identification Number: NA

Placard: None required

DOT Packing Group: NA

Emergency Response Guide No.: NA

SECTION 15. REGULATORY INFORMATION

CHEMICAL INVENTORIES:

All of the components of this material are on the Toxic Substances Control Act (TSCA) Chemical Inventory or are exempt.

SECTION 16. ADDITIONAL INFORMATION

Scale For NFPA and HMIS Ratings:

0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:-Personal Protective Equipment Index Recommendation, *-Chronic Effect Indicator. These values are obtained using the guidelines or published evaluations prepared by the National Fire Protections Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value
STEL - Short-term Exposure Limit
NA - Not Applicable
NDA - No Data Available

TWA - Time Weighted Average
REL/PEL - Recommended/Permissible Exposure Limit
CAS - Chemical Abstract Service Number
NE - Not Established

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