# SAFETY DATA SHEET – SAND & GRAVEL

## 1. Identification

**Product identifier: Sand & Gravel**

**Other means of identification**:

Sand and Gravel aggregate may be used in the manufacture of bricks, mortar, cement, concrete, plasters, paving materials, and other construction materials. Sand and Gravel aggregate may be distributed in bags, totes, and bulk shipments.

**Recommended Restrictions:** None known.

**Manufacturer/Importer/Supplier/Distributor information:**

Company: Pike Industries, Inc.
Address: 3 Eastgate Park Rd. Belmont, NH 03220
Telephone: 1- (603) 527-5100
Website: www.pikeindustries.com
Contact person Emergency phone number (24 Hours): 1-800-424-9300

## 2. Hazards Identification

**Physical hazards Health Hazards:** Not classified. Carcinogenicity Category 1A
Specific Target Organ Toxicity, Repeated Exposure Category 2

**OSHA defined hazards:** Not classified.

**Label Elements**

**Hazard Pictograms:**

**Signal Word: DANGER**

**Hazard Statements:** May cause cancer. May cause damage to organs (lung) through prolonged or repeated exposure.

**Precautionary statement Prevention:**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection

**Response**: If exposed or concerned: Get medical advice/attention.

**Storage:** Restrict or control access to stockpile areas.

**Engulfment hazard:** To prevent burial or suffocation, do not enter a confined space, such as a silo, bulk truck or other storage container or vessel that stores or contains aggregates without an effective procedure for assuring safety.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC):** None known.

**Supplemental information:**

Respirable Crystalline Silica (RCS) may cause cancer. Sand and Gravel is a naturally occurring mineral complex that contains varying quantities of quartz (crystalline silica). In its natural bulk state, sand and gravel is not a known health hazard. Sand and Gravel may be subjected to various natural or mechanical forces that produce small particles (dust) which may contain respirable crystalline silica (particles less than 10 micrometers in aerodynamic diameter). Repeated inhalation of respirable crystalline silica (quartz) may cause lung cancer according to IARC and NTP; ACGIH states that it is a suspected cause of cancer. Other forms of RCS (e.g., tridymite and cristobalite) may also be present or formed under certain industrial processes.

## 3. Composition/information on ingredients

| | | |
|---|---|---|
| **Mixtures Chemical name CAS number:** | None | > 99 |
| | Crystalline Silica (Quartz) | 14808-60-7 > 1 |

## 4. First Aid Measures

**Inhalation:** Sand and Gravel dust: Move to fresh air. Call a physician if symptoms develop or persist. Inhaling dust may cause discomfort in the chest, shortness of breath, and coughing.

**Skin Contact:** Sand and Gravel dust: Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye Contact:** Sand and Gravel dust: Immediately flush with plenty of water for at least 15. Hold eyelids apart. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Get medical attention if irritation develops or persists.

**Ingestion:** Rinse mouth and drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

**Most important symptoms/effects, acute and delayed:**
Prolonged inhalation may cause chronic health effects. This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica liberated from this product can cause silicosis, and may cause cancer.

**Indication of immediate medical attention and special treatment needed:**
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Pre-existing medical conditions that may be aggravated by exposure include disorders of the eye, skin and lung (including asthma and other breathing disorders).

**General information:** If addicted to tobacco, smoking will impair the ability of the lungs to clear themselves of dust.

## 5. Fire-fighting Measures

| | |
|---|---|
| **Suitable extinguishing media:** | Sand and Gravel is not flammable. Use fire-extinguishing media appropriate for surrounding materials. |
| **Unsuitable extinguishing media:** | None known. |
| **Specific hazards arising from the chemical:** | No unusual fire or explosion hazards noted. Not a combustible dust. |
| **Special protective equipment and precautions for firefighters:** | Use protective equipment appropriate for surrounding materials. |
| **Firefighting equipment/instructions:** | No specific precautions. |
| **Specific methods:** | Contact with powerful oxidizing agents may cause fire and/or explosions (see section 10 of SDS). |
| **General fire hazards:** | No unusual fire or explosion hazards noted. |

## 6. Accidental Release Measures

**Personal precautions, and emergency procedures:**
Wear appropriate protective equipment and clothing during clean-up of materials that contain or may liberate sand and gravel dust.

**Methods and materials for containment and cleaning up Environmental precautions:**
Spilled material, where dust is generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust. Do not dry sweep or use compressed air for clean-up. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Avoid discharge of fine particulate matter into drains or water courses.

## 7. Handling and Storage

**Precautions for safe handling:** Do not handle until all safety precautions have been read and understood. Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage:** Avoid dust formation or accumulation.

## 8. Exposure Controls/Personal Protection

### Occupational exposure limits

1 – Value equivalent to OSHA formulas (29 CFR 1910.1000; 29 CFR 1917; 29 CFR 1918).
2 – Value also applies to MSHA Metal / Non-Metal (1973 TLVs at 30 CFR 56/57.5001).
3 – OSHA enforces 0.250 mg/m³ in construction and shipyards (CPL-03-00-007).
4 – Value also applies to OSHA construction (29 CFR 1926.55 Appendix A) and shipyards (29 CFR 1915.1000, Table Z).
5 – MSHA limit = 10 mg/m³.

**OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Ingredient Name | Exposure Limits | | |
|---|---|---|---|
| ***U.S. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)*** | **Type** | **Value** | **Form** |
| ***Particulates not otherwise classified***<br>(CAS SEQ250) | PEL<br>PEL | 5 mg/m$^3$<br>15 mg/m$^3$ | Respirable friction<br>Total Dust (4) |
| ***US. OSHA Table Z-3 (29 CFR 1910.1000)*** | | | |
| ***Crystalline Silica (Quartz)***<br>(CAS 14808-60-7) | TWA<br>TWA | 0.3 mg/m$^3$<br>0.1 mg/m$^3$ | Respirable<br>Total Dust (1, 2, 3) |
| ***Tridymite and Cristobalite***<br>*(other forms of crystalline TWA silica) (CAS Mixture)* | TWA<br>TWA | 0.15 mg/m$^3$<br>0.05 mg/m$^3$ | Total Dust (1)<br>Respirable (1, 2) |
| ***Particulates not otherwise classified***<br>*(CAS SEQ250)* | TWA | 5 mg/m$^3$<br>15 mg/m$^3$ | Respirable fraction (1)<br>Total Dust (1, 4, 5) |
| ***US. ACGIH Threshold Limit Values® Components Type*** | | | |
| ***Crystalline Silica***<br>*(all forms; CAS mixture)* | TWA | 0.025 mg/m$^3$ | Respirable fraction |
| ***Particulates not otherwise classified***<br>*(CAS SEQ250)* | TWA | 3 mg/m$^3$<br>10 mg/m$^3$ | Respirable particles (2)<br>Inhalable particles (2) |
| ***US. NIOSH: Pocket Guide to Chemical Hazards Components Type Value*** | | | |
| ***Crystalline Silica***<br>*(all forms; CAS mixture)* | TWA | 0.05 mg/m$^3$ | Respirable dust |

**Appropriate engineering controls:**
Good general ventilation (typically 10 air changes per hour indoors) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Exposure guidelines:**
OSHA PELs, MSHA PELs, and ACGIH TLVs are 8-hr TWA values. NIOSH RELs are for TWA exposures up to 10-hr/day and 40-hr/wk. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. Terms including “Particulates Not Otherwise Classified,” “Particulates Not Otherwise Regulated,” “Particulates Not Otherwise Specified,” and “Inert or Nuisance Dust” are often used interchangeably; however, the user should review each agency’s terminology for differences in meanings.

**Biological limit values:** No biological exposure limits noted for the ingredient(s).

**Individual protection measures, such as personal protective equipment**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

| | |
|---|---|
| **Eye/face protection:** | Wear safety glasses with side shields (or goggles). |
| **Skin protection:** | Use personal protective equipment as required. |
| **Hand protection:** | Use personal protective equipment as required. |
| **Other:** | Use personal protective equipment as required. |
| **Respiratory protection:** | When handling or performing work with sand and gravel that produces dust or respirable crystalline silica in excess of applicable exposure limits, wear a NIOSH-approved respirator that is properly fitted and is in good condition. Respirators must be used in accordance with all applicable workplace regulations. |
| **Thermal hazards:** | Not anticipated. Wear appropriate thermal protective clothing, when necessary. |
| **General hygiene considerations:** | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |

## 9. Physical and Chemical Properties

**Appearance**

| | | | |
|---|---|---|---|
| **Physical state** | Solid. Solid, particles | **Upper/lower flammability or explosive limits** | Not applicable |
| **Form Color** | Various, salt and pepper | **Vapor pressure** | Not applicable |
| **Odor** | Not applicable | **Vapor density** | Not applicable |
| **Odor threshold** | Not applicable | **Relative density** | Not applicable |
| **pH** | Not applicable | **Solubility** | Not applicable |
| **Melting point/freezing point** | Not applicable | **Solubility (water)** | Insoluble |
| **boiling point and boiling range** | Not applicable | **Partition coefficient (n-octanol/water)** | Not applicable |
| **Flash point** | Non-combustible | **Auto-ignition temperature** | Not applicable |
| **Evaporation rate** | Not applicable | **Decomposition temperature** | Not applicable |
| **Flammability (solid, gas)** | Not applicable | **Viscosity** | Not applicable |

## 10. Stability and Reactivity

| | |
|---|---|
| **Reactivity:** | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| **Chemical stability:** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions:** | No dangerous reaction known under conditions of normal use. |

## 11. Toxicological Information

**Information on toxicological effects**

| | |
|---|---|
| **Acute toxicity:** | Not expected to be acutely toxic. |
| **Corrosion/irritation:** | ***Skin:*** This product is not expected to be a skin hazard.<br>***Serious eye damage/eye irritation:*** Direct contact with eyes may cause temporary irritation. |
| **Inhalation:** | Repeated inhalation of respirable crystalline silica (quartz) may cause silicosis, a fibrosis (scarring) of the lungs. Silicosis is irreversible and may be fatal. Silicosis increases the risk of contracting pulmonary tuberculosis. Some studies suggest that repeated inhalation of respirable crystalline silica may cause other adverse health effects including lung and kidney cancer. |
| **Ingestion:** | Not likely, due to the form of the product. However, accidental ingestion of the content may cause discomfort. |

**Sensitization:** ***Skin:*** Not known to be a dermal irritant or sensitizer
***Respiratory:*** No respiratory sensitizing effects known.

**Germ cell mutagenicity:** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic

**Reproductive toxicity:** Not expected to be a reproductive hazard.

**Aspiration hazard:** Not expected to an aspiration hazard.

**Symptoms related to physical, chemical and toxicological characteristics:**
***Sand and Gravel dust:*** Discomfort in the chest. Shortness of breath. Coughing.

**Carcinogenicity:** Respirable crystalline silica has been classified by IARC and NTP as a known human carcinogen, and classified by ACGIH as a suspected human carcinogen.

| Product/ingredient name | OSHA | IARC | ACGIH | NTP |
|---|---|---|---|---|
| Crystalline Silica (Quartz) CAS14808-60-7) | Not Listed | 1 Carcinogenic to humans | A2 | Known to be human Carcinogen |
| Respirable Tridymite and Cristobalite (Other forms of Crystalline) (CAS Mixture) | Not listed | 1 Carcinogenic to humans | - | - |

**Specific target organ toxicity – repeated exposure**

| Name | Category | Route Exposure | Target Organs |
|---|---|---|---|
| Crystalline Silica (Quartz) CAS14808-60-7) | - | Inhalation | Not reported to have effects |
| Respirable Tridymite and Cristobalite (Other forms of Crystalline) (CAS Mixture) | - | Inhalation | Not reported to have effects |

**Specific target organ toxicity – Chronic effects**

| Name | Category | Route Exposure | Target Organs |
|---|---|---|---|
| Crystalline Silica (Quartz) CAS14808-60-7) | - | Inhalation | May cause damage to organs (lung) through prolonged or repeated exposure |
| Respirable Tridymite and Cristobalite (Other forms of Crystalline) (CAS Mixture) | - | Inhalation | May cause damage to organs (lung) through prolonged or repeated exposure |

**Information on likely routes of exposure Inhalation:**
Prolonged inhalation of respirable crystalline silica may be harmful. May cause damage to organs (lungs) through prolonged or repeated exposure. There are reports in the literature suggesting that excessive crystalline silica exposure may be associated with autoimmune disorders and other adverse health effects involving the kidney. In particular, the incidence of scleroderma (thickening of the skin caused by swelling and thickening of fibrous tissue) appears to be higher in silicotic individuals. To date, the evidence does not conclusively determine a causal relationship between silica exposure and these adverse health effects.

## 12. Ecological Information

**Eco-toxicity**
Not expected to be harmful to aquatic organisms. Discharging sand and gravel dust and fines into waters may increase total suspended particulate (TSP) levels that can be harmful to certain aquatic organisms.

**Persistence and degradability:** Not applicable.

**Bio-accumulative potential:** Not applicable.

**Mobility in soil:** Not applicable.

**Other adverse effects:** No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, and global warming potential) are expected from this component.

## 13. Disposal Considerations

**Disposal instructions:** Do not allow fine particulate matter to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with fine particulates. Dispose of contents in accordance with local/regional/national/international regulations.

**Hazardous waste code:** Not regulated.

**Waste from residues / unused products:** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging:** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty packaging materials should be recycled or disposed of in accordance with applicable regulations and practices.

## 14.Transportation Information

| | DOT Classification | IMDG | IATA |
|---|---|---|---|
| **UN Number** | Not regulated as dangerous goods. | Not regulated as dangerous goods. | Not regulated as dangerous goods. |
| **UN proper shipping name** | - | - | - |
| **Transportation hazard class(es)** | - | - | - |
| **Packing group** | - | - | - |
| **Environmental Hazards** | - | - | - |
| **Additional information** | - | - | - |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not Applicable**

## 15.Regulatory Information

**US Federal regulations**

**OSHA Hazard Communication Standard 29 CFR 1910.1200:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):** Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):** Not listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**: Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA):**

***Hazard categories:***

Immediate Hazard -No

Delayed Hazard -Yes

Fire Hazard -No

Pressure Hazard -No

Reactivity Hazard -No

**SARA 302 Extremely hazardous substance:** Not listed.

**SARA 311/312 Hazardous chemical:** Yes

**SARA 313 (TRI reporting)**: Not Regulated

**Other federal regulations Clean Air Act (CAA) Section 112**

**Hazardous Air Pollutants (HAPs) List:** Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):** Not regulated.

**Safe Drinking Water Act (SDWA):** Not regulated.

**US state regulations**

- **Massachusetts – RTK**: Substance List - Crystalline Silica (Quartz) (CAS 14808-60-7) - Respirable Tridymite and Cristobalite (other forms of crystalline silica) (CAS Mixture)
- **New Jersey - Worker and Community Right-to-Know Act**: Substance List - Crystalline Silica (Quartz) (CAS 14808-60-7) Respirable Tridymite and Cristobalite (other forms of crystalline silica) (CAS Mixture)
- **Pennsylvania - Worker and Community Right-to-Know Law:** Substance List - Crystalline Silica (Quartz) (CAS 14808-60-7) Respirable Tridymite and Cristobalite (other forms of crystalline silica) (CAS Mixture)
- **Rhode Island - RTK:** Not regulated.
- **California Proposition 65**:
  WARNING: This product contains a chemical known to the State of California to cause cancer. California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance: Crystalline Silica (Quartz) (CAS 14808-60-7)

**International Inventories Country(s) or region Inventory name On inventory (yes/no)***

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory: **Yes**

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other Information

Date of issue: 04/28/2016
Version: 06/01/2015
Revised Section(s): N/Ap

**Notice to reader:** While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of sand and gravel as it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with sand and gravel to produce sand and gravel products. Users should review other relevant material safety data sheets before working with this sand and gravel or working on sand and gravel products.

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**Abbreviations**

ACGIH — American Conference of Governmental Industrial Hygienists
CAS — Chemical Abstract Service
CERCLA — Comprehensive Emergency Response and Comprehensive Liability Act
CFR — Code of Federal Regulations
DOT — Department of Transportation
GHS — Globally Harmonized System
HEPA — High Efficiency Particulate Air
IATA — International Air Transport Association
IARC — International Agency for Research on Cancer
IMDG — International Maritime Dangerous Goods
NIOSH — National Institute of Occupational Safety and Health
NOEC — No Observed Effect Concentration
NTP — National Toxicology Program
OSHA — Occupational Safety and Health Administration
PEL — Permissible Exposure Limit
REL — Recommended Exposure Limit
RQ — Reportable Quantity
SARA — Superfund Amendments and Reauthorization Act
SDS — Safety Data Sheet
TLV — Threshold Limit Value

TPQ — Threshold Planning Quantity
TSCA — Toxic Substances Control Act
TWA — Time-Weighted Average
UN — United Nations