



Safety Data Sheet

SDS No. SSA-RGA-072022

Conforms to HazCom 2012/U.S.

Section 1: IDENTIFICATION

Product Name(s): Gravel

Product Synonyms: Natural Sand, River Sand, Mason Sand, Fill Sand, Asphalt Sand, Golf Course Sand, Bank Sand, Mortar Sand, Construction Sand, Paver Sand

Mar-Zane Materials
S&S Aggregates Co.
Corporate Offices
3570 S. River Rd.
P.O. Box 1585
Zanesville, Ohio 43702-1585

Information Telephone Number:
1-740-453-0127 (9am to 5pm EST)

For Chemical Emergency ONLY:
(spill, leak, fire, exposure or accident)

CHEMTREC
1-800-424-9300 24 HOURS / 7 Days

Recommended Use: Natural Sand is used in the manufacture of construction related applications such as: brick, mortar, Asphalt cement, Portland concrete, plaster.

Note: This SDS covers many types of Natural Sands. Individual composition of hazardous constituents will vary between material specifications.

Section 2: HAZARD(S) IDENTIFICATION

Hazard Classifications: Category 2, Health Hazard. Organ Toxicity, Repeated Exposure
Category 1A, Health Hazard. Carcinogenicity / Inhalation
Category 1, Eye Damage



NFPA



WARNING



WARNING

Hazard Statements: May cause cancer by Inhalation.
May cause eye Irritation.
Possibly carcinogenic to humans.
Causes damage to lungs, kidneys, and autoimmune system through prolonged or repeated exposure by inhalation.

Precautionary Statements:

Eye Contact: Sand Particles can cause moderate eye irritation, redness, and itching. Airborne dust may cause immediate or delayed irritation or inflammation. Eye exposures require immediate first aid to prevent damage to the eye.

Skin Contact: Repeated or prolonged contact to sand may cause dry skin, discomfort, irritation, and dermatitis.

Inhalation (chronic): Respirable Crystalline Silica (RCS) may cause cancer. Sand is a naturally occurring mineral complex that contains varying quantities of quartz (crystalline silica). In its natural bulk state, Sand is not a known health hazard. It 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.

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

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.

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

Other Hazards: None Known

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance: N/A

Mixture:

Component	Percent (% wt)	CAS Number
Natural Sand	>99	none
Crystalline Silica	>1	14808-60-7

Note: N/A

Section 4: FIRST AID MEASURES

- Inhalation:** If excessive inhalation occurs, remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or develops later.
- 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 develops later.
- Skin Contact:** Wash with water and a pH neutral soap or a mild skin detergent. Wash contaminated clothing if there is potential for direct skin contact.
- For contact with hot material, immerse or flush skin with cold water for at least 15 minutes. Call a physician. Do not attempt to remove solidified material, since removal may cause further tissue injury.
- Ingestion:** If swallowed, rinse mouth and do not induce vomiting. If gastrointestinal discomfort occurs, persists or develops later, get medical attention.

Signs and Symptoms of Exposure:

There are generally no signs or symptoms of exposure to respirable crystalline silica. Often, chronic silicosis has no symptoms. The symptoms of chronic silicosis, if present, are shortness of breath, wheezing, cough and sputum production. The symptoms of acute silicosis which can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as 6 months, are the same as those associated with chronic silicosis; additionally, weight loss and fever may also occur. The symptoms of scleroderma, an autoimmune disease, include thickening and stiffness of the skin, particularly in the fingers, shortness of breath, difficulty swallowing and joint problems.

Direct skin and eye contact with dust may cause irritation by mechanical abrasion. Some components of the product are also known to cause corrosive effects to skin, eyes and mucous membranes. Ingestion of large amounts may cause gastrointestinal irritation and blockage. Inhalation of dust may irritate nose, throat, mucous membranes and respiratory tract by mechanical abrasion. Coughing, sneezing, chest pain, shortness of breath, inflammation of mucous membrane, and flu-like fever may occur following exposures in excess of appropriate exposure limits. Repeated excessive exposure may cause pneumoconiosis, such as silicosis and other respiratory effects.

Section 5: FIREFIGHTING MEASURES

- Extinguishing Media:** **Suitable Extinguishing Media:** Sand and Gravel is not flammable. Use fire-extinguishing media appropriate for surrounding materials.
- Unsuitable Extinguishing Media:** None known.
- Special Hazards Arising From the Substance or Mixture:** No unusual fire or explosive hazards noted. Not a combustible dust product.
- Special Protective Equipment and Precautions for Firefighters:** Use protective equipment appropriate for surrounding materials.
- Fire Fighting Equipment / Instructions:** No specific precautions.
- General Fire Hazards:** No unusual fire or explosion hazards noted.

Section 6: ACCIDENTAL RELEASE MEASURES

- General:** Use a shovel to scrape up material and place material into suitable containers for recovery or disposal. Do not dry sweep or use compressed air for clean-up. Do not wash material down sewage and drainage systems or into bodies of water (e.g. streams). Wear appropriate protective equipment to avoid inhalation as described in Section 8.
- Waste Disposal Method:** Dispose of material according to Federal, State, Provincial, and Local regulations.

Section 7: HANDLING AND STORAGE

- General:** Handle with care and use appropriate control measures. Avoid contact with skin, eyes, and clothing. Use additional precautions when handling sand material. Maintain employee exposure levels below established regulatory limits. Avoid material to contact skin or eyes. Do not breath dust. Use all appropriate Personal Protective Equipment (PPE) described in Section 8.
- Usage:** Cutting, crushing, or grinding hardened material or other crystalline silica bearing materials will release respirable crystalline silica. Use all appropriate measures of dust control or suppression, and Personal Protective Equipment (PPE) described in Section 8.
- Storage:** Avoid dust formation.
- Clothing:** Remove and launder clothing that is soiled with sand material. Thoroughly wash hands and exposed skin after exposure to sand material.

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Component	OSHA PEL	ACGIH-TLV-TWA	NIOSH REL
Natural Sand	15 mg/m ³ (T); 5 mg/m ³ (R)	10 mg/m ³ (I); 3 mg/m ³ (R)	10 mg/m ³ (T); 5 mg/m ³ (R)
Crystalline Silica	0.3 mg/m ³ (T); 0.1 mg/m ³ (R)	0.025 mg/m ³ (R)	0.05 mg/m ³ (R)

(T) Total Dust
(R) Respirable Fraction
(I) Inhalable Fraction

- Engineering Controls:** Use local exhaust or general dilution ventilation when using sand material or during activities that generate dust, to maintain levels below exposure limits. Good general ventilation (typically 10 air changes per hour indoors) should be used. Ventilation rates should be matched to conditions.

Personal Protective Equipment (PPE):

- Respiratory Protection: Under ordinary conditions no respiratory protection is required. When dust can not be avoided, wear a NIOSH approved respirator that is properly fitted and is in good condition when exposed to dust or fumes above exposure limits.
- Eye Protection: Wear ANSI approved glasses, safety goggles, or face shield when handling sand to prevent contact with eyes.
- Skin Protection: Wear leather or cloth work gloves to prevent skin contact. Thoroughly wash hands and exposed skin after exposure to sand material.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Granular, Solid.
Appearance:	White or Brown/Grey in Color
Odor:	No Odor
Vapor Pressure:	No Data Available
Vapor Density:	No Data Available
Specific Gravity:	2.3 – 2.8
Evaporation Rate:	No Data Available
pH (In Water):	Neutral
Melting Point:	No Data Available
Freezing Point:	No Data Available
Boiling Point:	No Data Available
Flash Point:	No Data Available
Auto-Ignition Temp.	No Data Available
Flammability (solid, gas)	No Data Available
Flammable Lower Limit:	No Data Available
Flammable Upper Limit:	No Data Available
Viscosity:	none, solid
Solubility in Water:	Insoluble
Relative Density:	No Data Available
Decomposition Temperature:	No Data Available
Partition Coefficient: N-Octanol/water:	No Data Available

Section 10: STABILITY AND REACTIVITY

Stability:	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical Stability:	Material is stable under normal conditions.

Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Hazardous Decomposition Products: None

Sections 11: TOXICOLOGICAL INFORMATION

Primary Routes of Exposure:	Inhalation:	Skin:	Ingestion:	Eye;
	Yes	Yes	No	Yes

Sections 11: TOXICOLOGICAL INFORMATION (CONTINUE)

Summary of health effect data on sand components:

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 silica may cause other adverse health effects including lung and kidney cancer.

Skin Contact: Not Classified. Ph Neutral

Eye Contact: Not Classified. Ph Neutral

Ingestion: Not likely, due to the form of the product. However, accidental ingestion of the content may cause discomfort.

Symptoms Related to the Physical, Chemical and Toxicological Characteristics: Dust may cause discomfort in the chest. Shortness of breath. Coughing.

Information on Toxicological Effects:

Acute Toxicity: Not Classified.

Skin Corrosion/Irritation: Not Classified.

Eye Damage/Irritation: Not Classified.

Respiratory Sensitization: Not Classified.

Skin Sensitization: Not Classified.

Germ Cell Mutagenicity: Not Classified.

Carcinogenic Categories:

IARC (International Agency for Research on Cancer): 14808-60-7, Quartz (SiO₂)

NTP (National Toxicology Program): 14808-60-7, Quartz (SiO₂)

OSHA-Ca (Occupational Safety & Health Administration): None of the ingredients are listed.

Reproductive Toxicity: Not Classified.

Specific Target Organ Toxicity – Single Exposure: Not Classified.

Specific Target Organ Toxicity – Repeated Exposure: Respirable crystalline silica: Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation)

Aspiration Hazard: Not Classified.

Chronic Effects: 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 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

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity Effects:

Toxicity: No additional information available

Persistence and Degradability: Not available

Bioaccumulative Potential: Not available

Mobility in Soil: Not available

Other Adverse Effects: Not available

Section 13: DISPOSAL CONSIDERATIONS

Dispose of waste and containers according to Federal, State, Provincial, and Local regulations.

Section 14: TRANSPORT INFORMATION

DOT Not regulated for transport

IMDG Not regulated for transport

IATA Not regulated for transport

TDG Not regulated for transport

Section 15: REGULATORY INFORMATION

Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

OSHA / MSHA Hazard Communication Standard:

This product has been evaluated and determined to be hazardous as defined in OSHA's Hazard Communication Standard.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: Not Listed

SARA Section 304: This product is not listed as a CERCLA hazardous substance.

SARA Section 311/312: The following EPA hazard categories apply to this product:
- Acute (Immediate) - Health – Hazard –
- Chronic (Delayed) – Health – Hazard -

SARA Section 313: This product is not regulated

Section 15: REGULATORY INFORMATION

RCRA:

If discarded in its purchased form, this product would not be a hazardous waste either by listing or characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

California Proposition 65:

Crystalline silica (airborne particulates of respirable size) is known by the State of California to cause cancer.

Section 16: OTHER INFORMATION

Abbreviations:

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
(B)	Inhalable fraction, as benzene – soluble aerosol	OSHA	Occupational Safety and Health Administration
CAS No	Chemical Abstract Service number	PEL	Permissible Exposure Limit
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	pH	Negative log of hydrogen ion
CFR	Code of Federal Regulations	PPE	Personal Protective Equipment
DOT	U. S. Department of Transportation	(RP)	Respirable Particulate
EST	Eastern Standard Time	RCRA	Resource Conservation and Recovery Act
IARC	International Agency for Research on Cancer	SARA	Superfund Amendments and Reauthorization Act
MG/M ³	Milligrams per cubic meter	SCBA	Self-Contained Breathing Apparatus
MSHA	Mine Safety and Health Administration	(TP)	Total Particulate
N/A	Not Available	TDG	Transportation of Dangerous Goods
NFPA	National Fire Protection Association	TLV	Threshold Limit Value
NIOSH	National Institute for Occupational Safety and Health	TWA	Time Weighted Average (8 hour)

This SDS (Sections 1-16) was revised on July 20, 2022.

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