Safety Data Sheet - SDS: Sand and Gravel

SECTION 1. Identification

PRODUCT IDENTIFIER:	Sand and Gravel
OTHER IDENTIFIABLE NAMES: RELEVANT	Natural Sand, Silica Sand, Crystalline Silica(Quartz), Gravel
KNOWN USES:	Sand and Gravel may be used in the manufacture of bricks, mortar, pavestones, cement, concrete, plasters, stuccos, paving materials, asphalts, engine sands, traction sands, arena sands, sports turfs, athletic facilities, etc. Sand and gravel aggregate may be distributed in bulk quantities, or in bulk bags.
RESTRICTIONS:	Sand and gravel is NOT sold as a blasting media.
SUPPLIER INFORMATION:	**Osprey Minerals** **391 Fairview Church Road** **Mt. Croghan, SC 29727**
EMERGENCY CONTACT:	**843-658-6885**

SECTION 2. Hazard Identification

GHS Classification:

CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY - Category 2
REPEATED EXPOSURE
EYE DAMAGE/IRRITATION - Category 2A

GHS label Elements:

Hazard pictograms:

Signal word: Danger

Hazard statement:

May cause damage/cancer to organs (lungs) via prolonged, or repeated exposure by inhalation.
May cause skin irritation.
May cause serious eye damage.

Precautionary Statements:	DO NOT HANDLE UNTIL SAFETY INFORMATION PRESENTED IN THIS SDS HAS BEEN READ AND UNDERSTOOD.
Prevention:	Do not breathe dust, or mists. Do not eat, drink, or smoke while handling this product. Wear protective gloves and clothing, as well as eye protection, and a respirator.
Response/Contact:	If exposed, or concerned ask for medical advice/attention. If Inhaled remove victim to fresh air and keep in a position comfortable for breathing. If skin and hair are exposed wash skin/hair thoroughly with plenty of water. Take off contaminated clothing and wash before reuse. If in the eyes, rinse/flush continuously with water for several minutes. If swallowed, rinse mouth and do not induce vomiting. Wear eye protection and reparatory protection following this SDS, NIOSH guidelines, and other applicable regulations. If concerned, exposed, or unwell, or experience irritation of the eyes, skin, mouth, or throat/nasal passage persist; Seek medical attention.
Storage/use:	Avoid creating dust when handling, using, or storing this product. Avoid dust if at all possible. Use adequate ventilation when handling this product. Engulfment hazard - To prevent burial, or suffocation , do not enter a confined space such as a silo, bulk truck, or other storage, or vessels that stores this product without an effective and approved procedure for assuring safety. Stay clear of tall stockpiles that may avalanche and engulf. **THIS MATERIAL IS NOT TO BE USED AS AN ABRASIVE FOR BLASTING.**
Disposal:	Dispose of contents/container in accordance with local/ regional/national/international regulations.
Hazards not otherwise classified (HNOC):	Not known
Supplemental Information:	Some studies state 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. When Sand and Gravel is in a state of movement small particles (dust) may become airborne and may contain respirable crystalline silica (quartz). Respirable crystalline silica may cause lung cancer according to IARC and NTP. ACGIH states that it is a suspected cause of cancer.

SECTION 3. Composition/Information on Ingredients

CAS Number/Other Identifiers

NAME	%	CAS Number
Crystalline Silica (Quartz)	>l	14808-60-7
Sand and Gravel	> 99	None

Crystalline Silica (Quartz) is the only known element that may present a health hazard due to dust inhalation. Trace amounts of other naturally occurring elements, mined from the earth, might be detected, however, there are no known ingredients that present any health hazards.

Occupational exposure limits to crystalline silica (quartz) are listed on page 8.

SECTION 4. First aid measures

DESCRIPTION/ ACTION

INHALATION: Immediately move victim to fresh air.

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

SKIN: Rinse with soap and water. Contact a physician if irritation persists, or develops later.

INGESTION: If swallowed, rinse mouth and do not induce vomiting. If gastrointestinal discomfort occurs, persists, or develops later, seek medical attention.

SIGNS AND SYMPTOMS OF EXPOSURE

Generally, there are no signs or symptoms of short term exposure to respirable crystalline silica. Long term exposure to respirable crystalline silica, without using approved respiratory mask, may lead to chronic or acute silicosis, and may lead to cancer. The symptoms of chronic silicosis if persistent are shortness of breath, wheezing, cough, and sputum production. The symptoms of acute silicosis which can occur with exposures to very heavy 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. Direct skin and eye contact with dust and sand particles may cause irritation by

mechanical abrasion. Ingestion of large amounts of the product may cause gastrointestinal irritation and blockage. Inhalation of crystalline silica dust may irritate nose, throat, mucous membranes and respiratory tract by mechanical abrasion. Coughing, sneezing, chest pains, 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.

PHYSICIANS Provide general supportive measures and treat symptomatically. Keep patient under observation. Symptoms may be delayed.

GENERAL Pre-existing medical conditions that may be aggravated by exposure include disorders of the skin and lung (including asthma and other breathing disorders). Smoking tobacco is discouraged as this will impair the ability of the airways and lungs to collect and clear themselves of dust.

SECTION 5. FIRE FIGHTING MEASURES

COMBUSTIBLE	**NO**
EXTINGUISHING AGENT	Use extinguishing media compatible with surrounding fire.
PROPER PROCEDURES	**NONE**
PROTECTIVE EQUIPMENT	Use protective equipment compatible with surrounding fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES

In the event Respirable crystalline silica dust is being generated through movement of product, ventilate, or wet down the area with water. Before spill clean-up, wet the material with water, or collect the material using a method that does not produce dust such as a High-Efficiency Particulate Air (HEPA) vacuum. Wear appropriate personal protective equipment as specified in section 8, including appropriate respirators during and following clean up, or whenever airborne dust is present to ensure exposures remain below occupational exposure limits (OELs - refer to section 8.)

SECTION 7. HANDLING AND STORAGE

Do NOT handle until all safety precautions have been read and understood.

Follow protocols set forth in section 8 of this SOS when handling this product.

When using, or handling this media in a dry state, wear NIOSH approved respirators, and carefully change out clothing, and shower, washing thoroughly with soap and water.
Do not breathe dust. Avoid contact with skin and eyes. Do not stand on large piles, for this media could be unstable causing an avalanche.

Use adequate ventilation and an approved dust collection system that will reduce airborne dust levels to below OELs. It is also recommended that NIOSH approved respirators be worn when there is any indication dust may be generated.

Observe good industrial hygiene practices. Promptly removed dusty clothing and laundry before reuse.

Use good housekeeping procedures to prevent the accumulation of dust in the work place.

SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

CONTROL PARAMETERS

Occupational Exposure Limits

1 - Value equivalent to OSHA formulas (29 CFR 1910.1000; 29 CFR 1917; 29 CFR1918)

2 - Value also applies to MSHA Metal/Non-Metal (1973 TLV's at 30 CFR 56/57.5001)

3 - OSHA enforces 0.250 mg/m^3 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= 10mg/m^3

Ingredient Name	Exposure Limits
Particulates not otherwise classified (CAS SEQ250)	**ACGIH TLV (United States, 3/2012)** TWA: 3 mg/ m^3. Form: Respirable particles (2) TWA: 10 mg/m^3. Form: Inhalable particles (2) **OSHA PEL (United States, 6/2010)** PEL: 5 mg/ m^3. Form: Respirable fraction PEL: 15 mg/ m^3. Form: Total dust (4) TWA: 5 mg/ m^3. Form: Respirable fraction (1) TWA: 15 mg/ m^3. Form: Total dust (1,4,5)
Crystalline Silica (Quartz) (CAS 14808-60-7)	**OSHA PEL (United States, 6/2010)** TWA: 0.3 mg/ m^3. Form: Total dust (1,2) TWA: 0.1 mg/m^3. Form: Respirable (1,2,3)
Crystalline Silica (all Forms; CAS mixture)	**ACGIH TLV (United States, 3/2012)** TWA: 0.025 mg/m^3. Form: Respirable fraction **NIOSH REL (United States, 6/2009)** TWA: 0.05 mg/m^3. Form: Respirable dust
Tridymite and Cristobalite (other forms of crystalline silica) (CAS Mixture)	**OSHA PEL (United States, 6/2010)** TWA: 0.15 mg/m^3. Form: Total dust (1) TWA: 0.05 mg/m^3. Form: Respirable (1,2)

Appropriate Engineering Controls:	Use good ventilation practices if available. Ventilation rates should match the condition application. If possible use enclosures, exhaust fans, dust collectors, or wet scrubbers, or other engineering controls to maintain levels below the recommended exposure limits. If exposure limits have not been established, use good general practices to maintain airborne levels to an acceptable level.
Exposure Guidelines:	OSHA PEL's, MSHA PEL's and ACGIH TLV's are 8 hour TWA values. NIOSH REL's are for TWA exposures up to 10 hr/day and 40 hours per week. Occupational exposure to nuisance dust, 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 due " 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 Hygiene Measures:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking (smoking is discouraged). Routinely wash work clothing and protective equipment to remove contaminants.
Eye/Face protection:	Wear safety glasses with side shields, or goggles.
Hand protection:	Use personal protection equipment as required.
Body protection:	Use personal protection equipment as required.
Other skin protection:	Use personal protection equipment as required.
Respiratory protection:	When handling or performing work that produces dust, or respirable crystalline

	dust, or respirable crystalline silica in excess of applicable exposure limits, wear a NIOSH approved respirator that is properly fitted and is good condition. Respirators must be used in accordance with all applicable workplace regulations.
Thermal hazards:	Not anticipated. Wear appropriate thermal protective clothing if necessary.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state/appearance:	Solid, particles of granular mixture
Color:	Various colors
Odor:	Not applicable
Odor threshold:	Not applicable
Ph:	Not available
Melting point:	Not applicable
Boiling point:	Not applicable
Flash point:	Noncombustible
Burning time:	Not applicable
Burning rate:	Not applicable
Evaporation rate:	Not applicable
Flammability (solid, gas):	Not applicable
Lower & Upper explosive flammable limits:	Not applicable
Vapor pressure:	Not applicable
Vapor density:	Not applicable
Relative density:	Not available
Solubility:	Not available
Solubility in water:	Insoluble
Particle coefficient: n-octanol/water:	Not applicable
Auto-ignition temperature:	Not applicable
Decomposition temperature:	Not applicable
SADT:	Not available
Viscosity:	Not applicable

SECTION 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 know under conditions of normal use.
Conditions to avoid:	Avoid contact with strong oxidizing agents.
Incompatible materials:	Crystalline silica may react violently with strong

Hazardous decomposition products: oxidizing agents, causing fire and explosions. Silica dissolves in hydrofluoric acid producing a corrosive gas-silicon tetra fluoride.

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Acute toxicity: Not expected to be acutely toxic.

Irritant/Corrosion:
Skin: Dust may cause irritation through mechanical abrasion. Not expected to be a skin hazard.
Eyes: Direct contact with the eyes may cause temporary irritation through mechanical abrasion.
Inhalation: Repeated inhalation of respirable crystalline silica (quartz) may cause silicosis. Silicosis is fibrosis, or scarring of the lungs. Silicosis is irreversible and may be fatal. Silicosis increase the risk of contracting pulmonary tuberculosis. Some studies have suggest that repeated inhalation of respirable crystalline silica may cause other adverse health effects including lung and kidney cancer.

Sensitization:
Respiratory sensitization: No respiratory sensitizing effects known.

Skin sensitization: Not known to be a dermal irritant or sensitizer.

Mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Aspiration hazard: Not expected to be an aspiration hazard.

Reproductive toxicity: Not expected to be a reproductive hazard.

Symptoms related to physical, chemical, and toxicological characteristics:
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	HTP
Crystalline Silica (Quartz) CAS 14808-60-7	Not listed	1 carcinogen to humans	A2	Known to be a carcinogen
Respirable Tridymite and Cristoballite (other forms of crystalline) (CAS mixture)	Not Listed	1 carcinogen to humans	-	-

Specific target organ toxicity (Acute Exposure)

Name	Category	Route of exposure	Target organs
Crystalline Silica (Quartz) CAS 14808-60-7	-	Inhalation	Not reported to have effects
Respirable Tridymite and Cristoballite (other forms of crystalline) (CAS mixture)	-	Inhalation	Not reported to have effects

Specific target organ toxicity (Chronic Exposure)

Name	Category	Route of exposure	Target organs
Crystalline Silica (Quartz) CAS 14808-60 -7		Inhalation	May cause damage to organs (Lung through prolonged or repeated exposure).
Respirable Tridymite and Cristoballite (other forms of crystalline) (CAS mixture)		Inhalation	May cause damage to organs (Lung through prolonged or repeated exposure).

Potential Chronic Health Effects: General: Prolonged inhalation of respirable crystalline silica may be harmful. May cause damage to organs (lungs) through prolonged, or repeated exposure. There are reports that suggests that excessive exposure to crystalline silica may be associated with autoimmune disorders and other adverse effects involving the kidney. In particular, the incidence of scleroderma, the thickening of the skin caused by swelling and the 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.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Persistence & Degradabltliy: Not applicable
Bioaccumulative potential: Not applicable
Mobility in soil: Not applicable
Other adverse effects: No other adverse environmental effects; ozone depletion, photochemical ozone creation potential, global warming potential, are expected from this component.

SECTION 13. DISPOSAL CONSIDERATIONS

Crystalline silica (quartz) is not hazardous to the environment. Dispose of waste in accordance with federal, state, and local laws and regulations.

Empty containers, bags, or liners may contain some product residue. Handle and dispose of in a safe and responsible manner in accordance with federal, state, and local laws and regulations.

If this product is contaminated with another component during use, it is the responsibility of the user to assess the appropriate disposal method.

SECTION 14. TRANSPORT INFORMATION

DOT Hazard Classification	None
Placard Requirement	None
Label Requirement	Label as required by OSHA Hazard Communication Standard 29CFR 1910.1200(f), and applicable state and local regulations.

SECTION 15. REGULATORY INFORMATION

OSHA: Crystalline Silica is NOT listed as a carcinogen.
OSHA Hazard Communication Standard 29 CFR 1910.1200: This product is a "Hazardous Chemical".
TSCA: Not regulated
CERCLA- 40 CFR § 302.4: Crystalline Silica (quartz) is NOT classified as a Hazardous waste under the Comprehensive Environmental Response, Compensation and Liability Act.
RCRA - 40 CFR § 261 et seq: Crystalline Silica (quartz) is NOT classified as a Hazardous waste under the Resource Conservation and Recovery Act.
EPCRA: Crystalline Silica (quartz) is NOT an extremely hazardous substance under regulations of 40 CFR Part 355, Appendices A and B, and is NOT a toxic chemical subject to the requirements of section 313.
Clean Air Act: Crystalline Silica (quartz) does not contain any Class I, or Class II ozone depleting substances.
FDA - 21 CFR § 175.300(b)(3): Silica is included in the list of substances that may be included in coatings used in food contact surfaces.
SARA - Section 311/312:

Name: Crystalline Silica (quartz) CAS 14808-60-7
Percent: >I
Fire Hazard: NO
Reactivity: NO
Sudden release of pressure: NO
Immediate (acute) health hazard: NO
Delayed (chronic) health hazard: YES

SARA - Section 313 (Form R-Report Requirements)

Name: Crystalline Silica (quartz)
CAS: 14808-60-7
%: Not regulated

STATE REGULATIONS:

Massachusetts RTK: The following components are listed: Crystalline Silica (quartz) CAS 14808-60-7, Respirable Tridymite and

New Jersey RTK:	Cristobalite (other forms of crystalline silica, CAS mixture) The following components are listed: Crystalline Silica (quartz) CAS 14808-60-7, Respirable Tridymite and Cristobalite (other forms of crystalline silica, CAS mixture) The following components are
Pennsylvania RTK:	listed: Crystalline Silica (quartz) CAS 14808-60-7, Respirable Tridymite and Cristobalite (other forms of crystalline silica, CAS mixture)
Rhode Island RTK:	Not regulated

California Prop. 65: WARNING - This product contains Crystalline Silica and chemicals (trace metals) known to the State of California to cause cancer.

Name:	Crystalline Silica (Quartz)
CAS:	14808-60-7
Cancer:	YES
Reproductive:	NO
Significant risk level:	NO
Maximum acceptable dosage level:	NO

International Regulations:

Name:	Crystalline Silica (Quartz)
CAS:	14808-60-7
TSCA:	YES
Canada:	DSL
WHMIS:	D2A (Materials causing other toxic effects)
EEC:	EINECS

SECTION 16. OTHER INFORMATION

DEFINITIONS OF ACRONYMS/ABBREVIATIONS:

ACGIH:	American Conference of Governmental Industrial Hygienists
ANSI:	American National Institute
APF:	Assigned Protection Factor
Calf.REL:	California Inhalation Reference Exposure Limit
CAS:	Chemical Abstracts Service
CERCLA:	Comprehensive Environmental Response, Compensation and Liability Act
CFR:	US Code of Federal Regulations
DHHS:	Department of Health and Human Services
EPA:	Environmental Protection Agency
EPCRA:	Emergency Planning and Community Right to Know Act
FDA:	Food and Drug Administration
GHS:	Global Harmonized System
HEPA:	High-Efficiency Particulate Air
IARC:	International Agency for Research on Cancer
IDLH:	Immediately Dangerous to Life and Health. Mine
MSHA:	Safety and Health Administration
NIOSH:	National Institute Occupational Safety & Health, US Department of Health and Human Services

NIOSH REL:	NIOSH Recommended Exposure Limit
NTP:	National Toxicology Program
OEL:	Occupational Exposure Limit
OSHA:	Occupational Safety and Health Administration, US Department of Labor
PEL:	Permissible Exposure Limit
PMF:	Progressive Massive Fibrosis
RCRA:	Resource Conservation and Recovery Act
SARA TitleIII:	Title III of the Superfund Amendments and Reauthorization Act, 1986
SOS:	Safety Data Sheet
STOT:	Specific Target Organ Toxicity
TLV:	Threshold Limit Value
TSCA:	Toxic Substance Control Act
TWA:	Time Weighted Average

USERS RESPONSIBILITY:

The OSHA Hazard Communication Standard 29 CFR 1910 .1 200 requires that this SDS be made available to employees, or anyone who handle, or may be exposed to this product. Educate and train anyone who comes in contact with this product as to applicable safety procedures and precautions.

THIS MATERIAL IS NOT TO BE USED AS AN ABRASIVE FOR BLASTING.

NOTICE/DISCLAIMER:

The information provided in this SDS, as of September, 25, 2015, is true and accurate according to data currently available. It is believed that the information contained in this SDS provides the necessary good practices information to safely handle this product as it relates to health and environmental concerns. This SDS does not address the safety and hazards that may be present when other materials are mixed with this product. In the event other materials are mixed with this product, it is the USER's responsibility to research these materials as to health and environmental concerns and to implement the necessary training and procedures to ensure the safe handling of other products mixed with sand and gravel. It is also the USER's responsibility, due to the inability to know how this product is being used, to satisfy oneself as to the validity of the information in this SDS for one's own particular use.

OSPREY SANDS, LLC dba OSPREY MINERALS

DISCLAIMER

Information in this SDS is believed to be true and accurate at this time. No Guarantee or warranty of any kind is made with respect to information contained herein. We assume no responsibility and disclaim all liability for any defects from the purchase, resale, or exposure to any of our Crystalline Silica (quartz) products. Customers and users of our Crystalline Silica (quartz) must comply with the applicable safety and health laws, safety and health regulations, and orders, including the OSHA Hazardous Communication Standard.