SAFETY DATA SHEET

2433 No. 2 Sideroad, Burlington Ontario L7P 0G8
Phone: 905-335-5250
1-800-263-6320

SECTION I: MATERIAL IDENTIFICATION AND USE

Material Name / Identifier:	Natural Sand and Gravel
Manufacturer's Name:	NELSON AGGREGATE CO 2433 NO. 2 SIDEROAD BURLINGTON ON L7P 0G8
Phone Number:	905-335-5250
Chemical Name:	Sand and Gravel
Chemical Family:	N/A
Chemical Formula:	Complex mixture (naturally variable)
Trade Name and Synonyms:	Aggregate, sand, crushed gravel
Molecular Weight:	N/A
Material use:	construction, ready-mix concrete, concrete products, asphalt

Note: this SDS covers many types of sand and gravel. Individual composition of hazardous constituents will vary between sand and gravel types.

SECTION 2: HAZARDOUS IDENTIFICATION


Label elements: DANGER

Hazardous Ingredient:	Sand and Gravel* (Primarily Granitic, Metamorphic and Sedimentary rock particles)
Approximate Concentration Percentage	100
C.A.S., N.A. or U.N. Numbers:	N/A
LD50 (Specify Species and Route)	N/A
LC50 (Specify Species and Route)	N/A

*Hazardous Ingredient	Quartz (Crystalline Silica)
Approximate Concentration Percentage	7-13%
C.A.S., N.A. or U.N. Numbers:	14808-60-7
LD50 (Specify Species and Route)	N/A
LC50 (Specify Species and Route)	N/A

Hazardous Ingredient:	Mica
Approximate Concentration Percentage	7-13%
C.A.S., N.A. or U.N. Numbers:	12001-26-2
LD50 (Specify Species and Route)	N/A
LC50 (Specify Species and Route)	N/A

Hazard Statement: May cause respiratory irritation. May cause cancer (inhalation)

Prevention: Do not handle until all safety precautions have been read and understood.
Do not breathe dust. If inhaled take person to fresh air and place person in a comfortable position for breathing.
Wash hands and any exposed areas thoroughly with water.
Do not eat, drink or smoke this product.
Wear protective gloves, clothing, face protection.

Response: If exposed or concerned get medical attention

Storage/Disposal: Recycle /dispose of contents and containers in accordance with local, regional, national, and international regulations.

Other Hazards: Dust may cause irritation to eyes, nose, throat, and lungs. Direct contact may result in corneal injury. Individuals with lung disease can be aggravated by exposure.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Physical State:	Solid
Odour and Appearance:	No odour; angular or rounded multi-colored particles of varying sizes
Odour Threshold (P.P.M.)	N/A
Specific Gravity	2.6 – 2.8
Vapour Pressure (MM)	N/A
Vapour Density (Air = 1)	N/A
Evaporation Rate	0
Solubility in Water (20º C)	Negligible
Boiling Point (º C)	N/A
Freezing Point (ºC)	N/A
pH:	N/A
Percentage Volatile (By Volume)	0
Coefficient of Water/Oil Distribution	N/A

SECTION 4: FIRST AID MEASURE

Description of first aid measures:

Eye Contact*:* Flush out eyes with running water for 15 minutes. Remove contact lenses if present. Do not rub eyes. Contact a physician if irritation persists.

Skin contact*:* Wash skin with soap and water*.* Get medical aid if irritation persists.

Inhalation*:* If breathing is difficult get person to fresh air. Keep in a comfortable position for breathing. Seek medical attention if you continue to feel unwell.

Most important symptoms and effects, both acute and delayed.

Irritation to eyes, skin and respiratory tract.

Inhalation: Chronic exposure to respirable sand and gravel dust containing quartz at levels exceeding exposure limits has caused silicosis, a serious and progressive pneumoconiosis which can be disabling and lead to death. Symptoms may appear at any time, even years after exposure has ceased. Symptoms of silicosis may include shortness of breath, difficulty in breathing, coughing, diminished work capacity, diminished chest expansion, reduction of lung volume and right heart enlargement and/or failure. The only reliable method of detecting silicosis is through a chest X-ray. Silicosis may aggravate other chronic pulmonary conditions and may increase the risk of pulmonary tuberculosis infection. Smoking aggravates the effects of silica exposure.

Skin contact: Sand and gravel may cause dry skin, abrasions, discomfort, irritation.

Eye Contact: Dust particles may cause irritation and mechanical abrasion. Symptoms include redness of the eyes.

Ingestion: Do not swallow sand and gravel. May cause gastro-intestinal discomfort.
Indication of any immediate medical attention and special treatment: If exposed seek medical advice and attention.

SECTION 5: FIRE FIGHTING MEASURES

Extinguisher Media: Use extinguishing media appropriate to the surrounding fire conditions. Natural sand and gravel is not combustible.

Flammability:	N/A
Means of Extinction:	N/A
Special Procedures	N/A
Flashpoint (º C) and Method	N/A
Upper Explosion Limit (Percentage by Volume)	N/A
Lower Explosion Limit (Percentage by Volume)	N/A
Autoignition Temperature (º C)	N/A
Hazardous Combustion Products	N/A

EXPLOSION DATA:

Sensitivity to Mechanical Impact	N/A
Sensitivity to Static Discharge	N/A

Special protective equipment and precautions for firefighter:
Exercise caution when fighting any chemical fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Reactivity

Chemical Stability	Yes
Incompatibility to other substances	No
Reactivity, and Under What Conditions:	No
Hazardous Decomposition Products:	None known

Personal precautions, protective equipment and emergency procedures.

Gloves: Work gloves recommended.

Respiratory: Wear appropriate respirator as indicated in section 8.

Other: Work clothing recommended to reduce skin exposure. Wash work clothing after every use.

Engineering Controls (Ventilation, Enclosed Process – Specify): Where feasible, the dust levels should be reduced through wet suppression, dust collection, ventilation, process enclosure and enclosed pressurized employee work stations.

Leak and Spill Procedure: Spilled materials, where dust can be generated, may expose clean-up personnel to respirable dust. Wetting of spilled material and/or use of protective respiratory equipment may be necessary.

Waste Disposal*:* Re-use clean materials; dispose of waste materials only in accordance with applicable federal, provincial and local laws and regulations.

Handling Procedures and Equipment: Respirable dust may be generated during processing, handling and storage. Avoid inhalation. Refer to "Personal protective equipment-Respiratory."

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:

Cutting, crushing or grinding hardened cement, concrete, or other crystalline silica material will release respirable crystalline silica. Use dust suppression, dust control and personal protective equipment described in section 8.

Conditions for safe storage:

Store in a manner that minimizes the activation of airborne dust.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits*:*

Respirable Silica dust – 0.01mg/ metre^3 (TWAEV)
TWAEV – Time-Weighted Average Exposure Values
For additional information on the above exposure limits, consult Ontario Regulations 833 section 4.

Irritancy of Material	Respiratory system, eyes, skin
Sensitization of Material	N/A
Synergistic Material	None Known

Carcinogenicity, Reproductive Effects, Teratogenicity, Mutagenicity:
As of the date of preparation of this SDS:

1) Sand and Gravel is not included on the ACGIH, IARC, NTP or OSHA lists of potential carcinogens.

2) Silica, in the form of crystalline Quartz, and as a component of this material, is listed as a potential carcinogen by IARC, but not by ACGIH, NTP or OSHA. IARC (International Agency for Research on Cancer) has determined that there is sufficient evidence of carcinogenicity of crystalline silica to experimental animals, and that there is limited evidence of the carcinogenicity to humans. Limited

evidence of carcinogenicity indicates that casual interpretation is credible, but alternate explanations such as chance, bias or confounding factors could not adequately be excluded. There is no evidence that sand and gravel is a teratogen, a mutagen or has a reproductive effect.

Exposure Controls:

Engineering Controls (Ventilation, Enclosed Process – Specify): Where feasible, the dust levels should be reduced through wet suppression, dust collection, ventilation, process enclosure and enclosed pressurized employee work stations.

Leak and Spill Procedure: Spilled materials, where dust can be generated, may expose clean-up personnel to respirable dust. Wetting of spilled material and/or use of protective respiratory equipment may be necessary.

Personal protective Measures: Gloves, Protective goggles. Respirator protection.

Eye/face: Wear approved safety glasses. Wear a face shield or full-face respirator when needed to prevent exposure to irritating dusts.

Skin protection: Wear suitable protective clothing.

Respiratory protection: When dust in air exceeds the occupational exposure, guidelines wear an approved respirator for protection from dusts containing crystalline silica. A respirator program will meet the regulation.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Odour and Appearance:	No odour; angular or rounded multi-colored particles of varying sizes
Odour Threshold (P.P.M.)	N/A
Specific Gravity	2.6 – 2.8
Vapour Pressure (MM)	N/A
Vapour Density (Air = 1)	N/A
Evaporation Rate	0
Solubility in Water (20º C)	Negligible
Boiling Point (º C)	N/A
Freezing Point (ºC)	N/A
pH:	N/A
Percentage Volatile (By Volume)	0
Coefficient of Water/Oil Distribution	N/A
Flammability:	N/A
Means of Extinction:	N/A
Special Procedures	N/A
Flashpoint (º C) and Method	N/A
Upper Explosion Limit (Percentage by Volume)	N/A
Lower Explosion Limit (Percentage by Volume)	N/A
Autoignition Temperature (º C)	N/A
Hazardous Combustion Products	N/A

EXPLOSION DATA:

Sensitivity to Mechanical Impact	N/A
Sensitivity to Static Discharge	N/A

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Sand and gravel dissolve in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Silicates react with powerful oxidizers such as fluorine, boron trifluoride, manganese trifluoride, and oxygen difluoride.

Chemical Stability: Yes

Conditions to avoid: High/low temperatures, Incompatible materials.

Incompatible materials: Hydrofluoric acid. Strong oxidizers.

SECTION 11: TOXICOLOGICAL INFORMATION

Route of Entry*:* Skin contact, Eye contact, Inhalation Chronic

Effects of Acute Exposure to Material*:* Exposure to dust may irritate respiratory system, eyes and skin. Use of natural Sand and Gravel for construction purposes is believed not to have caused acute toxic effects.

Effects of Chronic Exposure to Material*:*

1) Chronic exposure to respirable dust at levels exceeding exposure limits has caused pneumoconiosis.

2) Chronic exposure to respirable sand and gravel dust containing quartz at levels exceeding exposure limits has caused silicosis, a serious and progressive pneumoconiosis which can be disabling and lead to death. Symptoms may appear at any time, even years after exposure has ceased. Symptoms of silicosis may include shortness of breath, difficulty in breathing, coughing, diminished work capacity, diminished chest expansion, reduction of lung volume and right heart enlargement and/or failure. The only reliable method of detecting silicosis is through a chest X-ray. Silicosis may aggravate other chronic pulmonary conditions and may increase the risk of pulmonary tuberculosis infection. Smoking aggravates the effects of silica exposure.

LD50 of Material (Specify Species and Route)	N/A
LC50 of Material (Specify Species and Route)	N/A

SECTION 12: ECOLOGICAL INFORMATION

Toxicity: N/A

Persistence and degradability: N/A

Bio accumulative potential: N/A

Mobility in soil: N/A

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of contents and containers in accordance with local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION

N/A

SECTION 15: REGULATORY INFORMATION

Canadian regulations- Quartz listed on the domestic substances list. WHMIS classification class D division 2 Subdivision A. Very toxic material causing other toxic effects.

SECTION 16: OTHER INFORMATION

REVISION DATE: March 2021

The Company believes that the information contained herein is factual. The data and information presented are without warranty, guarantee or liability on our part, and are presented to the customer for his own consideration, investigation and verification.
