



MATERIAL SAFETY DATA SHEET

Sand and Gravel

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Sand and Gravel
Product Identifiers:	Aggregates, crushed gravel, crushed rock and stone, round stone, natural sand, bank sand and gravel, screened sand.
Product Use:	The manufacture of bricks, mortar, cement, concrete, plasters, paving materials, and used in road building, excavation work and other construction applications.
Manufacturer/Supplier:	AAROC Aggregates Ltd. 3003 Page Street London Ontario N5V 4J1
Phone Number:	519-652-2104
Emergency Phone:	519-652-2104
Date of Preparation:	April 4, 2016

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION

MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION. HARMFUL BY INHALATION
(Contains crystalline silica)

DO NOT use this product for abrasive blasting.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

- Eye:** May cause eye irritation.
- Skin:** May cause skin irritation.
- Ingestion:** May be harmful if swallowed. May cause stomach distress, nausea or vomiting.
- Inhalation:** Avoid breathing dust. Harmful by inhalation. May cause respiratory tract irritation.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation. May cause silicosis, autoimmune diseases, tuberculosis, and renal disease.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Breathing dust may cause nose, throat or lung discomfort and irritation. This may include coughing and choking.

Medical Conditions Aggravated By Exposure: Individuals with lung disease (e.g. bronchitis, emphysema, COPD, pulmonary disease) can be aggravated by exposure. Asthma. Allergies. Dust may aggravate preexisting skin, eye, and respiratory conditions.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.



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Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Crystalline silica (quartz)	14808-60-7	60 - 100

Section 4: FIRST AID MEASURES

- Eye Contact:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.
- Skin Contact:** In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.
- Inhalation:** Remove to fresh air. If symptoms persist, obtain medical attention.
- Ingestion:** If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Seek medical attention or call poison control.
- General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).
- Note to Physicians:** Symptoms may not appear immediately. The three types of silicosis include: chronic, accelerated and acute.

Section 5: FIRE FIGHTING MEASURES

- Flammability:** Not flammable by WHMIS criteria.
- Means of Extinction:**
- Suitable Extinguishing Media:** Powder, water spray, foam, carbon dioxide.
 - Unsuitable Extinguishing Media:** Not available.
- Products of Combustion:** May include, and are not limited to: oxides of carbon.
- Explosion Data:** :
- Sensitivity to Mechanical Impact:** Not available.
 - Sensitivity to Static Discharge:** Not available.
- Protection of Firefighters:** Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
- Environmental Precautions:** Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.
- Methods for Containment:** Place spilled material into a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
- Methods for Clean-Up:** Scoop up material and place in a disposal container. Provide ventilation. Wear appropriate PPE. Avoid inhalation of dust. Avoid actions that cause sand and gravel to become airborne during clean-up such as dry-sweeping or air-blowing. Dispose of sand and gravel according to local, state, provincial and federal regulations."
- Other Information:** Not available.

Section 7: HANDLING AND STORAGE

Handling:

Avoid contact with skin and eyes. Do not swallow. Do not breathe dust. Use only in well-ventilated areas. Avoid eating, drinking or smoking in dusty environments. Wash hands before eating, drinking, or smoking. Remove and launder dusty clothing after use.

Storage:

To prevent burial or suffocation, do not enter confined spaces or storage areas, like bins, silos, trucks that contain sand and gravel. Sand and gravel can release, fall or flow suddenly causing engulfment.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Ingredient	Exposure Limits ACGIH-TLV
Crystalline silica (quartz)	0.025 mg/m ³

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment:

Eye/Face Protection: Wear approved safety glasses or safety goggles.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing. Clean after use.

Respiratory Protection: In case of insufficient ventilation when exposed to dust above exposure limits, wear approved respiratory protection that is properly fitted.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Granular solid.
Colour:	White or light grey/brown.
Odour:	Not available.
Odour Threshold:	Not available.
Physical State:	Solid.
pH:	7
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	> 1000 °C (> 1832 °F)
Flash Point:	Not available.
Evaporation Rate:	Not available.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.



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Vapor Density:	Not available.
Specific Gravity:	2.7
Solubility in Water:	Insoluble.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	Not available.

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions.

Conditions of Reactivity: Heat. Incompatible materials.

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

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon.

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

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD ₅₀ (oral)	LC ₅₀
Crystalline silica (quartz)	500 mg/kg, rat	Not available.
Eye:	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.	
Skin:	May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.	
Ingestion:	May be harmful if swallowed. May cause stomach distress, nausea or vomiting.	
Inhalation:	Avoid breathing dust. Harmful by inhalation. May cause respiratory tract irritation.	

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system. May cause silicosis, autoimmune diseases, tuberculosis, and renal disease.

Chronic Effects: Hazardous by WHMIS criteria.

Carcinogenicity: Hazardous by WHMIS criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Crystalline silica (quartz)	G-A2, I-1, N-1, CP65

* See Section 15 for more information.

Mutagenicity: Not hazardous by WHMIS criteria.

Reproductive Effects: Not hazardous by WHMIS criteria.

Developmental Effects:

Teratogenicity: Not hazardous by WHMIS criteria.

Embryotoxicity: Not hazardous by WHMIS criteria.

Respiratory Sensitization: Not hazardous by WHMIS criteria.

Skin Sensitization: Not hazardous by WHMIS criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:

This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

TDG Classification

Not Regulated

Section 15: REGULATORY INFORMATION

Federal Regulations

Canadian: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Global Inventories

Ingredient

Crystalline silica (quartz)

**Canada
DSL/NDSL
DSL**

HMIS - Hazardous Materials Identification System

Health - 1*

Flammability - 0

Physical Hazard - 0

PPE – E

NFPA - National Fire Protection Association:

Health - 1

Fire - 0

Reactivity - 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Class D2A - Carcinogenicity

Class D2A - Chronic Toxic Effects

WHMIS Hazard Symbols:





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SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

- OSHA (O)** Occupational Safety and Health Administration.
- ACGIH (G)** American Conference of Governmental Industrial Hygienists.
A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.
- IARC (I)** International Agency for Research on Cancer.
1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.
- NTP (N)** National Toxicology Program.
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

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