



2433 NO. 2 Side Road, P.O. Box 1070, Burlington, ON L7R 4L8  
Phone: 905-335-5250 1-800-263-6320

### **MATERIAL SAFETY DATA SHEET**

#### **SECTION I : MATERIAL IDENTIFICATION AND USE**

Material Name / Identifier:	Sandstone
Manufacturer's Name:	NELSON AGGREGATE CO P.O BOX 1070 BURLINGTON ON L7R 4L8
Supplier's Name:	
Chemical Name:	Sandstone
Chemical Family:	Carbonate Rock
Chemical Formula:	Complex mixture (naturally variable)
Trade Name and Synonyms:	Aggregate, Dolomite, Crushed stone.
Molecular Weight:	Not Applicable
Material use:	construction, ready-mix concrete, concrete products, asphalt, agriculture, metallurgical processes, manufacture of cement, golf course sand

#### **SECTION II : HAZARDOUS INGREDIENTS OF MATERIAL**

*Hazardous Ingredient	Quartz (Crystalline Silica)
Approximate Concentration Percentage	Naturally variable composition (>70%)
C.A.S., N.A. or U.N. Numbers:	14808-60-7
LD50 (Specify Species and Route)	Not Applicable
LC50 (Specify Species and Route)	Not Applicable

#### **SECTION III : PHYSICAL DATA FOR MATERIAL**

Physical State:	Solid
Odour and Appearance:	No odour; angular grey/brown/white particles of varying sizes
Odour Threshold (P.P.M.)	Not Applicable
Specific Gravity	2.6 – 2.8
Vapour Pressure (MM)	Not Applicable
Vapour Density (Air = 1)	Not Applicable
Evaporation Rate	0
Solubility in Water (20° C)	Negligible Boiling
Point (° C)	Not Applicable
Freezing Point (°C)	Not Applicable pH: Not Applicable
Percentage Volatile (By Volume)	0
Coefficient of Water/Oil Distribution	Not Applicable

## **SECTION IV : FIRE AND EXPLOSION HAZARD OF MATERIAL**

Flammability: Will Not Burn  
Means of Extinction: Not Applicable Can be used to smother fire.

Special Procedures Not Applicable  
Flashpoint ( ° C) and Method None  
Upper Explosion Limit (Percentage by Volume) Not Applicable  
Lower Explosion Limit (Percentage by Volume) Not Applicable  
Auto-ignition Temperature ( ° C) None  
Hazardous Combustion Products Not Applicable

### **EXPLOSION DATA:**

Sensitivity to Mechanical Impact None  
Sensitivity to Static Discharge None

## **SECTION V : REACTIVITY DATA**

Chemical Stability Stable  
Incompatibility to other substances None Known  
  
Reactivity, and Under What Conditions: Neutralizing agent for strong acids  
Hazardous Decomposition Products: None known

## **SECTION VI : TOXICOLOGICAL PROPERTIES OF MATERIAL**

**Route of Entry:** Inhalation, eye contact, skin contact  
**Effects of Acute Exposure:** Eye Contact: Mechanical irritation causing redness  
**Ingestion:** Unlikely to occur  
**Inhalation:** Unlikely to occur but may cause mechanical irritation and coughing  
**Skin Absorption:** Will not absorb through skin  
**Skin Contact:** Mechanical irritation causing redness

### **Effects of Chronic Exposure:**

1. Chronic exposure to respirable dust at levels exceeding exposure limits has caused pneumoconiosis.
2. Chronic exposure to respirable 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.
3. Chronic (repeated and prolonged) exposure to respirable dust at levels exceeding exposure control limits has caused pneumoconiosis. Chronic (repeated and prolonged) exposure to respirable dusts containing silica (quartz) at levels exceeding exposure control 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 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 (quartz) exposure.

**Route of Entry:** Inhalation, eye contact, skin contact

**Effects of Acute Exposure:** Eye Contact: Mechanical irritation causing redness

**Ingestion:** Unlikely to occur

**Inhalation:** Unlikely to occur but may cause mechanical irritation and coughing

**Skin Absorption:** will not absorb through skin

**Skin Contact:** Mechanical irritation causing redness

Use of sand and gravel for construction purposes is believed not to have caused acute toxic effects.

**Effects of Chronic Exposure:**

1. Chronic (repeated and prolonged) exposure to respirable dust at levels exceeding exposure control limits has caused pneumoconiosis.
2. Chronic (repeated and prolonged) exposure to respirable dusts containing silica (quartz) at levels exceeding exposure control 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 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 (quartz) exposure.

**LD50 of Material:** Not Available

**LC50 of material:** Not Available

**Exposure Limits:** Varies with jurisdiction. 0.1 mg/m<sup>3</sup> respirable fraction (TWAEV)

TWAEV = Time Weighted Average Exposure Value (Ontario) Quartz and Tripoli; 0.05 mg/m<sup>3</sup> cristobalite.

For additional information on the above exposure limit, consult Ontario Regulations 490/09 and 491/09

**Irritancy of Material:** Mechanical irritation to respiratory system, eyes and skin

**Sensitization of material:** None known

**Synergistic Material:** None known

Carcinogenicity, Reproductive Effects, Teratogenicity, Mutagenicity:

As of the date of preparation of this MSDS (July 2010).

1. Sand and Gravel [Limestone] are [is] not included on ACGIH, IARC, NTP or OSHA lists of potential carcinogens;
2. Crystalline silica in the form of quartz, and as a component of this material is listed as carcinogenic by IARC, NTP, and ACGIH. The International Agency for Research on Cancer (IARC) has concluded that crystalline silica in the form of quartz or cristobalite from occupational sources should be classified as carcinogenic to humans (Group 1), upgraded from its previous classification as probably carcinogenic to humans (Group 2A). The US National Toxicology Program (NTP) identifies crystalline silica (respirable size) as a substance which may reasonably be anticipated to be a carcinogen, Group 2. The American Conference of Governmental Industrial Hygienists (ACGIH) has assigned a carcinogenicity designation, A2 Suspected Human Carcinogen, for crystalline silica (2007).

**SECTION VII : PREVENTATIVE MEASURES**

**Personal Protective Equipment:**

**Gloves (Specify):** Work gloves recommended

**Eye (Specify):** Safety glasses with a side shield should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or anticipated.

**Respiratory (Specify):** Refer to the Ontario Designated Substance Respirator Codes (June 2000):  $< 10X$  TWAEV Half mask particulate respirator with N-, R- or P- series filter and 95, 99 or 100% efficiency;  $< 25X$  TWAEV powered air purifying respirator with a hood or helmet and any type of particulate filter, or supplied air equipped with a hood or helmet and operated in a continuous flow mode. Respiratory protective equipment should be used in accordance with CSA Standard Z94.4-02.

**Other (Specify):** 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”.

**Storage Requirements:** None

**Special Shipping Information:** None

**SECTION VIII : FIRST AID MEASURES**

**Dust in Eyes:** Flush out eyes with running water for 15 minutes. Contact a physician if irritation persists.

**Dust on Skin:** Wash with soap and water. Contact a physician if irritation is aggravated.

**Dust Inhalation:** Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists.

**Ingestion:** Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention or contact poison control center immediately.

**SECTION IX : PREPARATION DATE OF MSDS**

Prepared by:

Telephone: (905) 335-5250

Date: January 15, 2015

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Additional Notes or References:

Ministry of Labour WHMIS Hotline  
(519) -439-3231

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