

## Material Safety Data Sheet

NB: N/A – Not Applicable or Not Available

### **Section I: Material Identification and Use**

Material Name/Identifier:	Natural Sand and Gravel
Manufacturer's Name:	Tri City Materials Ltd. PO Box 209 Petersburg, Ontario NOB 2H0
Supplier's Name:	Same
Chemical Name:	Sand and Gravel
Chemical Family:	N/A
Chemical Formula:	Complex mixture (naturally variable)
Trade Name & Synonyms:	aggregates, sand, crushed gravel
Molecular Weight:	N/A
Material Use:	construction, ready mix concrete, concrete products, asphalt

### **Section II: Hazardous Ingredients of Material**

Hazardous Ingredient:	Sand and Gravel (primarily granitic, meamorphic and Sedimentary rock particles)
Approximate Concentration:	100%
C.A.S., N.A. or U.N. Numbers:	N/A
LD50 (specify species & route):	N/A
LC50 (specify species & route):	N/A

### **Section III: Physical Data for Material**

Physical State:	Solid
Odour & Appearance:	No odour, angular or rounded, multi-coloured particles of Varying sizes
Odour Threshold (P.P.M.):	N/A
Specific Gravity:	2.5 – 2.8
Vapour Pressure (MM):	N/A
Vapour Density (Air = 1):	N/A
Evaporation Rate:	0
Solubility in Water (20°C):	Negligible
Boiling Point (1°C):	N/A
Freezing Point (°C):	N/A
pH:	N/A

Percentage Volatile (by volume): 0  
Coefficient of Water/Oil Distribution: N/A

#### Section IV: Fire & Explosion Hazard of Material

Flammability: No  
Means of Extinction: N/A  
Special Procedures: N/A  
Flashpoint (°C) & Method: N/A  
Upper explosion Limit  
(percentage by volume): N/A  
Lower Explosion Limit  
(percentage by volume): N/A  
Auto ignition Temperature (°C): N/A  
Hazardous Combustion Products: N/A

Explosion Data:  
Sensitivity to Mechanical Impact: N/A  
Sensitivity to Static Discharge: N/A

#### Section V: Reactivity Data

Chemical Stability: Yes  
Incompatibility to other substances: No  
Reactivity and under  
water condition: Neutralizing agent for strong acids  
Hazardous Decomposition products: None Known

#### Section VI: Toxicological Properties of Material

Route of entry: Skin contact, eye contact, inhalation chronic  
Effects of Acute Exposure  
of Material: Exposure to dust may irritate respiratory system, eyes and skin

Effects of Chronic Exposure to Material:

1. Chronic exposure to respirable limestone dust at levels exceeding exposure limits has caused pneumoconiosis.
2. Chronic exposure to respirable quartz containing limestone/dolomite dust at levels exceeding 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 (specify species & route): N/A  
LC50 (specify species & route): N/A

Exposure Limits:

1. Limestone (total dust) – 10mg/metre (TWAEV)
2. Respirable Silica dust – 0.1 mg/metre (TWAEV)

TWAEV: time weighted average exposure values

For additional information on the above exposure limits, consult Ontario Regulations 654/86 and 769/83 amended 23/87.

Irritancy of Material: N/A  
Sensitization of Material: N/A  
Synergistic Material: None Known

Carcinogenicity, reproductive effects, teratogenicity, mutagenicity as of the date of preparation of MSDS:

1. Limestone is not included on the ACGIH, IARC, or OSHA lists of potential carcinogens.
2. Silica, in form of crystalline Quartz, and as a component of this material, is listed as a potential carcinogen by IARC, but not y 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 change, bias or confounding factors could not adequately be excluded. There is not evidence that limestone is a teratogen, a mutagen or has a reproductive effect.

<b>Section VII: Preventative Measures</b>
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PERSONAL PROTECTIVE EQUIPMENT:

Gloves (specify): Work gloves recommended.  
Eyes (specify): Safety glasses with 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 Ontario Regulations (769/83 as amended for respiratory equipment specified for various respirable silica dust levels.)  
Other (specify): Work clothing recommended to reduce skin exposure.  
Wash work clothing after use.  
Engineering Controls: (Ventilation, enclosed process – specify): Where feasible, dust levels should be reduced through wet suppression, dust

Leak and Spill Procedures:	collection, ventilation, process enclosure, and enclosed pressurized employee work stations. 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 & Equip:	Respirable dust may be generated during processing, handling and storage – avoid inhalation. Refer to “Personal Protective Equipment – Respiratory”
Storage Requirements:	N/A
Special Shipping Information:	N/A

### **Section VIII: First Aid Measures**

Dust in Eyes:	Flush out eyes with running water for 15 minutes. Contact physician if irritation persists.
Dust on Skin:	Wash with soap and water. Contact physician if irritation is aggravated.
Dust Inhalation:	Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact physician if irritation persists.

### **Section IX: Preparation of MSDS**

Contact: Tri City Materials Ltd.  
 Telephone: 519-634-5110  
 Date: January 25<sup>th</sup>, 2010

**Additional Notes or References:**

Ministry of Labour: WHMIS – Mining Health & Safety Program  
 Telephone: 705-670-5695

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