DUNCOR ENTERPRISES INC.

# SAFETY DATA SHEET

## Section 1 - Product and Manufacturer Information

**Product Name:** Igneous or Granitic Rock

**Product Identifiers:** Gneiss

**Manufacturer:** Duncor Enterprises Inc.
101 Big Bay Point Rd., Barrie, ON

**Information Telephone Number:**
705-730-1999 (9:00 am - 5:00 pm)

**Product Use:** Aggregate is used in the manufacture of bricks, mortar, cement, concrete, plasters, paving materials, and other construction applications.

DO NOT use this product for abrasive blasting. This material safety data sheet and the information contained herein were not developed for abrasive blasting.

**Note:** This MSDS covers many aggregate types. Individual composition of hazardous constituents will vary between types of aggregate.

## Section 2 - Hazardous Components

| Component | Percent (By Weight) | CAS Number | OSHA PEL_TWA ($mg/m^3$) | ACGIH TLV_TWA ($mg/m^3$) | $LD_{50}$ | $LC_{50}$ |
|---|---|---|---|---|---|---|
| Mica * | 0-100 | 12001-26-2 | 3(R) | 3 (R) | NA | NA |
| Crystalline Silica | 40-70 | 14808-60-7 | [(10)/(%SiO2+2)](R); [(30)/(%SiO2+2)](T); | 0.05 (R) | NA | NA |
| Particulate Not Otherwise Regulated | - | NA | 5 (R)<br>15 (T) | 3 (R)<br>10 (T) | NA | NA |

Note: Exposure limits for components noted with an * contain no asbestos <1% crystalline silica

## Section 3 - Physical Properties

**Physical State:** Solid
**Appereance:** Angular particles, light salt and pepper colored, ranging in size from pebbles to boulders.

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| **Odour:** | No Odour | **Specific Gravity:** | 2.6-2.8 |
| **Boiling Point:** | N/A | **Vapor Density:** | N/A |
| **Vapour Pressure:** | N/A | **pH (in water):** | Neutral |
| **Evaporation Rate:** | N/A | **Solubility in Water:** | Insoluble |
| **Freezing Point:** | None, solid | **Boiling Point:** | None, solid |
| **Viscosity:** | None, solid | | |

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## Section 4 - Fire and Explosion Hazards

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| **Flashpoint & Method:** | Non-combustible |
| **General Hazard:** | Avoid breathing dust |
| **Fire Extinguishing Media:** | Use extinguishing media appropriate for surrounding fire |
| **Firefighting Equipment:** | Aggregate pose no fire related hazard. A SCBA is recommended to limit exposures to combustion products when fighting any fire. |
| **Combustion Products:** | None |

## Section 5 – Stability and Reactivity Data

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| **Stability:** | Stable. Avoid contact with incompatible materials. |
| **Incompatible Materials:** | Aggregate dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Silicates react with powerful oxidizers such as fluorine, boron trifluirode, chlorine trifluoride, manganese trifluoride, and oxygen difluoride. |
| **Hazardous Polymerization:** | None |
| **Hazardous Decomposition Products:** | None |

## Section 6 - Health Hazard Identification

**WARNING**

Toxic - Harmful by inhalation.
(Contains crystalline silica)

DO NOT use for Abrasive Blasting.

Use proper engineering controls, work practices, and Personal Protective Equipment (PPE) to prevent exposure to dust.

Read MSDS for details.

Respiratory Protection

Eye Protection

**Emergency Overview:** Igneous or Granitic rocks are a mixture of angular particles, in a variety of colors and ranging in size from pebbles to boulders. They are odorless and they are not combustible or explosive. A single, short-term exposure to aggregate presents little or no hazard.

**Potential Health Effects:**

**Skin:** Aggregates may cause dry skin, abrasions, discomfort and irritation.

**Eyes:** Eye contact to airborne dust may cause immediate or delayed irritation or inflammation. Eye exposures require immediate first aid and medical attention to prevent significant damage to the eye.

**Inhalation (acute):** Breathing dust may cause nose, throat, or lung irritation, including choking, depending on the degree of exposure.

**Inhalation (chronic):** Risk of injury depends on duration and level of exposure.

Silicosis: This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, a seriously disabling and fatal lung disease. See Note to Physicians in Section 4 for further information.

This product contains mica. Prolonged and repeated inhalation of respirable mica dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury depends on duration and level of exposure.

Carcinogenicity: Crystalline silica is classified by IARC and NTP as a known human carcinogen.

Autoimmune Disease: Some studies show that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders such as scleroderma (thickening of the skin), systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys.

Tuberculosis: Silicosis increases the risk of tuberculosis.

Renal Disease: Some studies show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

Ingestion: Do not ingest aggregates. Ingestion of small quantities of aggregates is not known to be harmful; ingesting large quantities can cause intestinal distress.

Medical Conditions Aggravated by Exposure: Individuals with lung disease (e.g. bronchitis, emphysema, COPD, pulmonary disease) can be aggravated by exposure.

## Section 7 – Handling and Storage

**General:**

Handle with care and use appropriate control measures.

Engulfment hazard. To prevent burial or suffocation, do not enter a confined space, such as a silo, bin, bulk truck, or other storage container or vessel that stores or contains aggregates. Dust can buildup or adhere to the walls of a confined space. The dust can release, collapse or fall unexpectedly.

Do not stand on stockpiles of aggregate, they may be unstable. Use engineering controls (e.g. wetting stockpiles) to prevent windblown dust from stockpiles, which may cause the hazards described in Section 3.

**Usage:**

This product is NOT to be used for abrasive blasting.

Cutting, crushing or grinding aggregates, hardened cement, concrete or other crystalline silica-bearing materials will release respirable crystalline silica. Use all appropriate measures of dust control or suppression, and Personal Protective Equipment (PPE) described in Section 8 below.

**Housekeeping:**

Avoid actions that cause dust to become airborne during clean-up such as dry sweeping or using compressed air. Use HEPA vacuum or thoroughly wet with water to clean-up dust. Use PPE described in Section 8 below.

**Storage Temperature:**

Unlimited.

**Storage Pressure:**

Unlimited.

**Clothing:**

Remove and launder clothing that is dusty before it is reused.

**Warning:**

Crystalline silica exists in several forms, the most common of which is quartz. If crystalline silica (quartz) is heated to more than 870º C it can change to a form of crystalline silica known as tridymite, and if crystalline silica (quartz) is heated to more than 1470º C it can change to a form of crystalline silica known as cristobalite. Crystalline silica as tridymite and cristobalite are more fibrogenic than crystalline silica as quartz. The OSHA PEL for crystalline silica as tridymite and cristobalite is one-half the PEL for crystalline silica (quartz); the ACGIH TLV crystalline silica as tridymite and cristobalite is 0.05 mg/m3 (R).

## Section 8 – Exposure Controls and Personal Protection

**Engineering Controls:** Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits.

**Personal Protective Equipment (PPE):**

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| Respiratory Protection: | Under ordinary conditions no respiratory protection is required. Wear a NIOSH approved respirator that is properly fitted and is in good condition when exposed to dust above exposure limits. |
| Eye Protection: | Wear ANSI approved glasses or safety goggles when handling dust to prevent contact with eyes. Wearing contact lenses when using aggregates, under dusty conditions, is not recommended. |
| Skin Protection: | Wear gloves in situations where abrasions from aggregates may occur. Remove clothing and protective equipment that becomes dusty and launder before reusing. |

## Section 9 – First Aid

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| **Eye Contact:** | Rinse eyes thoroughly with water for at least 15 minutes, including under lids, to remove all particles. Seek medical attention for abrasions. |
| **Skin Contact:** | Wash with cool water and a pH neutral soap or a mild skin detergent. Seek medical attention for rash or irritation. |
| **Inhalation:** | Move person to fresh air. Seek medical attention for discomfort or if coughing or other symptoms do not subside. |
| **Ingestion:** | Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention or contact poison control center immediately. |
| **Note to Physician:** | The three types of silicosis include:<br>• Simple chronic silicosis – which results from long-term exposure (more than 20 years) to low amounts of respirable crystalline silica. Nodules of chronic inflammation and scarring provoked by the respirable crystalline silica form in the lungs and chest lymph nodes. This disease may feature breathlessness and may resemble chronic obstructive pulmonary disease (COPD).<br>• Accelerated silicosis – occurs after exposure to larger amounts of respirable crystalline silica over a shorter period of time (5-15 years). Inflammation, scarring, and symptoms progress faster in accelerated silicosis than in simple silicosis. |

• Acute silicosis – results from short-term exposure to very large amounts of respirable crystalline silica. The lungs become very inflamed and may fill with fluid, causing severe shortness of breath and low blood oxygen levels.

Progressive massive fibrosis may occur in simple or accelerated silicosis, but is more common in the accelerated form. Progressive massive fibrosis results from severe scarring and leads to the destruction of normal lung structures.

## Section 10 – Other Information

The technical data contained herein is given as information only and is believed to be reliable. Duncor makes no guarantee of results and assumes no obligation or liability in connection therewith.

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| MSDS Prepared By: | Duncor Enterprises Inc. |
| Telephone: | 705-730-1999 |
| Revision Date: | April 2015 |