SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Fine Wollastonite (-6.25mm)

SYNONYMS: Wollastonite Sand PRODUCT DESCRIPTION: Various uses CAS NUMBER: Mixture

SUPPLIER NAME: Canadian Wollastonite

ADDRESS: 6675 Highway 15, Seeley's Bay, Ontario, Canada K0H 2N0

BUSINESS PHONE: 613-387-2734
BUSINESS FAX: 613-387-3934
EMERGENCY CONTACT: Local first responders
DATE OF PREPARATION: August 9, 2017

DATE OF LAST REVISION: New

SECTION 2 - HAZARDS IDENTIFICATION

Classification of the mixture

This product does meet the definition of a hazardous substance or preparation as defined by 29 CFR 1910. 1200 and WHMIS 2015.

Component(s) Contributing to Classification(s)

SiO2, CaO, K2O, Na2O, TiO2

GHS Label elements, including precautionary statements

Pictogram(s):



Signal Word:

Warning

GHS Hazard Classification(s):

Eye Irritation Category 2A

Hazard Statement(s):

H319 Causes serious eye irritation

Prevention Statement(s):

P264 Wash thoroughly after handling.

P280 Wear protective gloves/eye protection/face protection.

Response Statement(s):

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

Storage Statement(s):

P405 Store locked up.

Disposal Statement(s):

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards

POTENTIAL HEALTH EFFECTS:

INHALATION: Inhalation may cause respiratory irritation.

EYE: Direct contact may cause irritation with pain and redness.

SKIN: May cause irritation.

INGESTION: May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and

Diarrhea.

ROUTES OF ENTRY: Inhalation, Skin Contact and/or Eye Contact.

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS#	WT %
SiO2	7631-89-9	57.6
СаО	1305-78-8	23.7
MgO	1309-48-4	6.16
Al2O3	1344-28-1	4.89
K20	12136-45-7	2.07
Fe2O3	1309-37-1	2.01
Na2O	1313-59-3	1.51
S	7704-34-9	1.12
TiO2	13463-67-7	0.25

^{*}Note* Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).

SECTION 4 - FIRST-AID MEASURES

Description of first aid measures

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and SDS to health professional with contaminated individual

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if irritation persists.

SKIN CONTACT: Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder before re-use.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

Most important symptoms and effects, both acute and delayed

This product may cause eye irritation. Prolonged exposure can cause damage to the respiratory tract and is a carcinogenicity hazard.

Medical conditions aggravated by exposure:

This material or its emissions may aggravate pre-existing disorders involving any target organs mentioned in this Safety Data Sheet as being at risk.

Indication of immediate medical attention and special treatment needed

Treat symptoms and reduce over-exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

Extinguishing media

Water Fog, alcohol-resistant foam, dry chemical or CO2.

Specific hazards arising from the chemical

Explosion Sensitivity to Mechanical Impact: Not Sensitive.

Explosion Sensitivity to Static Discharge: Not expected

Special firefighting Procedure

Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spill Management:

Land Spill: Measures should be taken to minimize dust generation. Prevent entry into waterways, sewer, basements or confined areas. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

Small Spill: Measures should be taken to minimize dust generation Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

Environmental precautions

Do not let product enter drains, do not allow to sewers/surface or ground water. See Section 12, Ecological information.

Methods and material for containment and cleaning up

Pick up released product with appropriate implements & return to original container if reusable, or dispose. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING and STORAGE

Handling:

Read label for instructions in use of product. Avoid the inhalation of dust. Wear a dust-filtering face mask when handling. Avoid contact with eyes.

Storage:

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Specific end uses

Various uses.

SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

Control parameters

EXPOSURE LIMITS/GUIDELINES:

Chemical Name	Limit	Source
Wollastonite	TWA 15 mg/mg³ (Respirable Dust)	OSHA
	TWA 10 mg/mg ³ (Respirable Dust)	ACGIH
SiO2	TWA 10 mg/m3 / % SiO2 +2	OSHA
	TWA 0.025 mg/m3 (Respirable Fraction)	ACGIH

Exposure Controls

Currently, International exposure limits are established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below. Use local exhaust ventilation to control airborne dust. Ensure eyewash/safety shower stations are available near areas where this product is used.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include positive-pressure, air-supplied respirator in areas where H2S vapours may accumulate.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

EYE PROTECTION: Safety glasses are required. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

HAND PROTECTION: Use protective gloves as appropriate to minimize skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Information on basic physical and chemical properties

PHYSICAL STATE: Solid ODOR: None

ODOR THRESHOLD (PPM): Not Available

APPEARANCE / COLOR: light gray to white colour 9.9 in a 10 wt.-% water slurry

1540°C MELTING / FREEZING POINT (C°): **BOILING POINT (C°):** Not Available FLASH POINT (C°): Not Applicable **EVAPORATION RATE (nBuAc = 1):** Not Available FLAMMABILITY (solid, gas): Not Available FLAMMABLE LIMITS (in air by volume, %): Not Available VAPOR PRESSURE (mmHq): Not Applicable **VAPOR DENSITY (AIR=1):** Not Applicable 2.86-3.09 **RELATIVE DENSITY SOLUBILITY IN WATER (%)** Not Available PARTITION COEFFICIENT: N-OCTANOL/WATER: Not Available **AUTOIGNITION TEMPERATURE:** Not Available

DECOMPOSITION TEMPERATURE: H1120°C
VISCOSITY: Not Available
EXPLOSIVE PROPERTIES: Not Applicable

Other Information

OXIDISING PROPERTIES:

Molecular Weight:116.17 g/molPOUR POINT:Not Available

SECTION 10 - STABILITY and REACTIVITY

Reactivity: Not reactive.

Chemical Stability: Product is stable under recommended storage conditions. **Possibility of Hazardous Reactions:** Not expected, polymerization will not occur.

Conditions to avoid: Creation of dust. **Incompatible materials:** No data available.

Hazardous Decomposition Products: No data available.

SECTION 11 - TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

TOXICITY DATA: No specific data available for this product.

POTENTIAL HEALTH HAZARDS OR RISKS FROM EXPOSURE:

CARCINOGENICITY:

Wollastonite: IARC (1997) classifies wollastonite as Group 3 (not classifiable as to its carcinogenicity to humans), based on inadequate evidence in both humans and animals. In an epidemiological study of a small cohort of wollastonite quarry workers (Huuskonen et al, 1983), the observed deaths from all cancers and lung cancer were lower than expected. In a 2 year rat inhalation bioassay (NTP / McConnell et al, 1991), wollastonite did not cause an increased incidence of tumors; however, some concern exists regarding the concentration of specific fiber sizes used in the study.

Not Available

Quartz: Silica dust, crystalline, in the form of quartz is classified by IARC as Group 1 (carcinogenic to humans) based on "sufficient evidence" in occupationally exposed humans and sufficient evidence in animals. Crystalline silica of respirable size is classified by the NTP as a known human carcinogen. In its 2013 Proposed Rule on respirable crystalline silica, "OSHA preliminarily concludes that the human data provides ample evidence that exposure to respirable crystalline silica increases the risk of lung cancer among workers", while NIOSH identifies various crystalline or fused silicas as potential occupational carcinogens. However, not all epidemiologic and animal studies have demonstrated a cancer association and some uncertainty exists concerning the cancer classification of crystalline silica. For example, in Europe, a recent review concludes that crystalline silica should not be classified as a carcinogen since silicosis of the lung is the key endpoint for classification (Morfeld, 2010).

IRRITANCY OF PRODUCT: Exposure with this product may be irritating to exposed skin, eyes, and respiratory system. **SENSITIZATION OF PRODUCT:** This product is not considered a skin sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: This product does not contain components which are documented as reproductive hazards.

SECTION 12 - ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

Toxicity

No specifc data available for this product.

Persistence and degradability

No specifc data available for this product.

Bioaccumulative potential

No specifc data available for this product.

Mobility in soil

No specifc data available for this product.

Results of PBT and vPvB assessment

No specific data available on this product.

Other adverse effects

No specifc data available for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, and those of Canada.

SECTION 14 - TRANSPORTATION INFORMATION

DOT:

PROPER SHIPPING NAME: Not Regulated

HAZARD CLASS NUMBER and DESCRIPTION: Not applicable

UN IDENTIFICATION NUMBER: Not applicable

PACKING GROUP: Not applicable LABEL(S) REQUIRED: Not applicable

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2016): Not applicable

NOTE: Shipped in 10 & 25 Kg Bags, 1000 Kg Polypropylene Sacs, Bulk per Ton

MARINE POLLUTANT: None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49

CFR 172.101, Appendix B)

LAND (TDG):

PROPER SHIPPING NAME: Not Regulated

HAZARD CLASS NUMBER and DESCRIPTION: Not applicable

UN IDENTIFICATION NUMBER: Not applicable

PACKING GROUP: Not applicable **LABEL(S) REQUIRED:** Not applicable

SEA (IMDG):

PROPER SHIPPING NAME: Not Regulated

HAZARD CLASS NUMBER and DESCRIPTION: Not applicable

EMS NUMBER: Not applicable

UN IDENTIFICATION NUMBER: Not applicable

PACKING GROUP: Not applicable LABEL(S) REQUIRED: Not applicable

AIR (IATA)

PROPER SHIPPING NAME: Not Regulated

HAZARD CLASS NUMBER and DESCRIPTION: Not applicable

UN IDENTIFICATION NUMBER: Not applicable

PACKING GROUP: Not applicable **LABEL(S) REQUIRED:** Not applicable

TRANSPORTATION LIMITATIONS: Not applicable TRANSPORT DOCUMENT NAME: Not applicable

SECTION 15 - REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture UNITED STATES REGULATIONS

SARA REPORTING REQUIREMENTS: This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.

TSCA: All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA 311/312:

Acute Health: Yes Chronic Health: Yes Fire: No Reactivity: No

<u>U.S. CERCLA REPORTABLE QUANTITY (RQ):</u> CERCLA Reportable Quantity RQ: None

CLEAN WATER ACT:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

<u>CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65)</u>: This product contains ingredients which are on the California Proposition 65 lists: Silica, Crystalline, Quartz, Titanium Dioxide

CANADIAN REGULATIONS

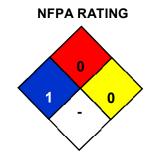
WHMIS Classification: Classified per WHMIS 2015. See section 2 for details.

CEPA: All components of this material are either on the Canadian Domestic Substances List (DSL), exempt, or have been notified under CEPA.

NATIONAL CHEMICAL INVENTORY LISTING: AICS, IECSC, DSL, EINECS, KECI, TSCA

SECTION 16 - OTHER INFORMATION





Caution: HMIS and NFPA ratings are based on a 0-4 rating scale 0= Minimal Hazard, 1= Slight, 2= Moderate, 3= High, 4= Extreme

GENERAL STATEMENTS:

Key or Legend to abbreviations and acronyms

AIHA - American Industrial Hygiene Association

ACGIH - American Conference of Governmental Industrial Hygienists

CASRN - Chemical Abstract Services Registry Number

CFR - Code of Federal Regulations

DOT - United States Department of Transportation
IARC - International Agency for Research on Cancer
OSHA - Occupational Safety and Health Administration
NIOSH - National Institute for Occupational Safety and Health

NTP - National Toxicology Program

PPM - Parts per million n.o.s. - not otherwise specified

Lbs. - Pounds

PMCC - Pensky-Martens Closed Cup

LC50 - Lethal Concentration 50 (concentration in water having a 50% chance of causing death to aquatic life)

EC50 - Effective Concentration that causes 50% inhibition in growth or mobilization

VOC - Volatile Organic Compound

PREPARED BY: Chris Eigbrett

MSDS to GHS Compliance (www.msdstoghs.com)

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END OF SDS