



Hornet Abrasive (TM)

Mohawk Garnet Inc.

Chemwatch: 48-5955
Version No: 3.1.1.1
Safety Data Sheet

Chemwatch Hazard Alert Code: 2

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Initial Date: Not Available
S.GHS.CAN.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	Hornet Abrasive (TM)
Synonyms	Not Available
Other means of identification	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Abrasive blasting, Vapour blasting, Water jet cutting.
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Details of the manufacturer/importer

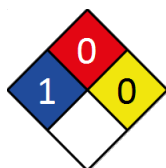
Registered company name	Mohawk Garnet Inc.
Address	808 Highway 17 East, Wahnapiatae, P0M 3C0 Ontario Canada
Telephone	(705) 694-5783
Fax	(705)694-5575
Website	www.mohawkgarnet.com
Email	info@mohawkgarnet.com

Emergency telephone number

Association / Organisation	Austin McMurdy
Emergency telephone numbers	(705) 626-1440
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture



CANADIAN WHMIS SYMBOLS

CANADIAN WHMIS CLASSIFICATION

Ingredient	CAS number	Classification Description	Classification Code
silica crystalline - quartz	14808-60-7	Very Toxic Material Causing Other Toxic Effects	D2A

GHS Classification	Not Applicable
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Label elements

GHS label elements	Not Applicable
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SIGNAL WORD	NOT APPLICABLE
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Hazard statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Continued...

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Substances**

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
12178-42-6	30-60	hoblende
12178-41-5	30-60	garnet natural
12001-26-2	<3	mica
14808-60-7	<1	silica crystalline - quartz

SECTION 4 FIRST AID MEASURES**Description of first aid measures**

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately with fresh running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ If fumes or combustion products are inhaled remove from contaminated area. ▶ Lay patient down. Keep warm and rested. ▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▶ Transport to hospital, or doctor.
Ingestion	<ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

For acute or short term repeated exposures to iron and its derivatives:

- ▶ Always treat symptoms rather than history.
- ▶ In general, however, toxic doses exceed 20 mg/kg of ingested material (as elemental iron) with lethal doses exceeding 180 mg/kg.
- ▶ Control of iron stores depend on variation in absorption rather than excretion. Absorption occurs through aspiration, ingestion and burned skin.
- ▶ Hepatic damage may progress to failure with hypoprothrombinaemia and hypoglycaemia. Hepatorenal syndrome may occur.
- ▶ Iron intoxication may also result in decreased cardiac output and increased cardiac pooling which subsequently produces hypotension.
- ▶ Serum iron should be analysed in symptomatic patients. Serum iron levels (2-4 hrs post-ingestion) greater than 100 ug/dL indicate poisoning with levels, in excess of 350 ug/dL, being potentially serious. Emesis or lavage (for obtunded patients with no gag reflex) are the usual means of decontamination.
- ▶ Activated charcoal does not effectively bind iron.
- ▶ Catharsis (using sodium sulfate or magnesium sulfate) may only be used if the patient already has diarrhoea.
- ▶ Deferoxamine is a specific chelator of ferric (3+) iron and is currently the antidote of choice. It should be administered parenterally. [Ellenhorn and Barceloux: Medical Toxicology]

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

	<ul style="list-style-type: none"> ▶ There is no restriction on the type of extinguisher which may be used. ▶ Use extinguishing media suitable for surrounding area.
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Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
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Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves in the event of a fire. ▶ Prevent, by any means available, spillage from entering drains or water courses.
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	<ul style="list-style-type: none"> ▶ Use fire fighting procedures suitable for surrounding area. ▶ DO NOT approach containers suspected to be hot. ▶ Cool fire exposed containers with water spray from a protected location. ▶ If safe to do so, remove containers from path of fire. ▶ Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	<ul style="list-style-type: none"> ▶ Non combustible. ▶ Not considered a significant fire risk, however containers may burn.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	<ul style="list-style-type: none"> ▶ Remove all ignition sources. ▶ Clean up all spills immediately. ▶ Avoid contact with skin and eyes. ▶ Control personal contact with the substance, by using protective equipment. ▶ Use dry clean up procedures and avoid generating dust. ▶ Place in a suitable, labelled container for waste disposal.
Major Spills	<p>Moderate hazard.</p> <ul style="list-style-type: none"> ▶ CAUTION: Advise personnel in area. ▶ Alert Emergency Services and tell them location and nature of hazard. ▶ Control personal contact by wearing protective clothing. ▶ Prevent, by any means available, spillage from entering drains or water courses. ▶ Recover product wherever possible. ▶ IF DRY: Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	<ul style="list-style-type: none"> ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps. ▶ DO NOT enter confined spaces until atmosphere has been checked. ▶ DO NOT allow material to contact humans, exposed food or food utensils. ▶ Avoid contact with incompatible materials. ▶ When handling, DO NOT eat, drink or smoke.
Other information	<ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. ▶ Store in a cool, dry area protected from environmental extremes. ▶ Store away from incompatible materials and foodstuff containers. ▶ Protect containers against physical damage and check regularly for leaks. ▶ Observe manufacturer's storage and handling recommendations contained within this MSDS. <p>For major quantities:</p> <ul style="list-style-type: none"> ▶ Consider storage in banded areas - ensure storage areas are isolated from sources of community water (including stormwater, ground water, lakes and streams). ▶ Ensure that accidental discharge to air or water is the subject of a contingency disaster management plan; this may require consultation with local authorities.

Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> ▶ Polyethylene or polypropylene container. ▶ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	<ul style="list-style-type: none"> ▶ WARNING: Avoid or control reaction with peroxides. All <i>transition metal</i> peroxides should be considered as potentially explosive. For example transition metal complexes of alkyl hydroperoxides may decompose explosively. ▶ The pi-complexes formed between chromium(0), vanadium(0) and other transition metals (haloarene-metal complexes) and mono- or poly-fluorobenzene show extreme sensitivity to heat and are explosive. ▶ Avoid reaction with borohydrides or cyanoborohydrides

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	garnet natural	Manganese and compounds (as Mn)	5 mg/m3 / --- ppm	--- mg/m3 / --- ppm	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	garnet natural	Manganese and inorganic compounds, (as Mn)	0.2 mg/m3	0.6 mg/m3	Not Available	Not Available

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Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	garnet natural	Particles (Insoluble or Poorly Soluble) Not Otherwise Specified: Inhalable fraction++ / Particles (Insoluble or Poorly Soluble) Not Otherwise Specified: Respirable fraction++	10 mg/m3 / 3 mg/m3	20 mg/m3 / 6 mg/m3	Not Available	Not Available
Canada - Northwest Territories Occupational Exposure Limits (English)	garnet natural	Manganese & compounds (as Mn)	Not Available	Not Available	5 mg/m3	Not Available
Canada - Northwest Territories Occupational Exposure Limits (English)	garnet natural	Welding fumes (total particulate)	5 mg/m3	10 mg/m3	Not Available	Not Available
Canada - Nova Scotia Occupational Exposure Limits	garnet natural	Manganese - Elemental & inorganic cmpds (as Mn)	0.2 mg/m3	Not Available	Not Available	TLV Basis: central nervous system impairment
Canada - Nova Scotia Occupational Exposure Limits	garnet natural	Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles / Particles (Insoluble or Poorly Soluble) [NOS] Respirable particles	10 mg/m3 / 3 mg/m3	Not Available	Not Available	See Appendix B current TLV/BEI Book
Canada - Prince Edward Island Occupational Exposure Limits	garnet natural	(Manganese and inorganic compounds, as Mn)	0.2 mg/m3	Not Available	Not Available	TLV® Basis: CNS impair
Canada - Prince Edward Island Occupational Exposure Limits	garnet natural	Particles (insoluble or poorly soluble) not otherwise specified	Not Available	Not Available	Not Available	See Appendix B
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	garnet natural	Manganese (as Mn) Dust and compounds	5 mg/m3	Not Available	Not Available	Not Available
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	garnet natural	Dust, inert or nuisance particulates / Nuisance particulates / Particulates Not Otherwise Classified (PNOC)	10 mg/m3	Not Available	Not Available	Not Available
Canada - Alberta Occupational Exposure Limits	garnet natural	Manganese, elemental & inorganic compounds, as Mn	0.2 mg/m3	Not Available	Not Available	Not Available
Canada - Alberta Occupational Exposure Limits	garnet natural	Particulate Not Otherwise Regulated - Total / Particulate Not Otherwise Regulated - Respirable	10 mg/m3 / 3 mg/m3	Not Available	Not Available	Not Available
Canada - British Columbia Occupational Exposure Limits	garnet natural	Manganese - Elemental & inorganic compounds, as Mn	0.2 mg/m3	Not Available	Not Available	Not Available
Canada - British Columbia Occupational Exposure Limits	garnet natural	Particles (Insoluble or Poorly Soluble) Not Otherwise Classified (PNOC)	10 mg/m3	Not Available	Not Available	(N) - the 8-hour TWA listed in the Table is for the total dust. The substance also has an 8-hour TWA of 3 mg/m3 for the respirable fraction.
Canada - Ontario Occupational Exposure Limits	garnet natural	Particles (Insoluble or Poorly Soluble) Not Otherwise Specified (PNOS)	10, 3 mg/m3	Not Available	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	mica	Mica (respirable fraction++)	3 mg/m3	6 mg/m3	Not Available	Not Available
Canada - Nova Scotia Occupational Exposure Limits	mica	Mica	3 mg/m3	Not Available	Not Available	TLV Basis: pneumoconiosis
Canada - Prince Edward Island Occupational Exposure Limits	mica	Mica	3 mg/m3	Not Available	Not Available	TLV® Basis: Pneumoconiosis
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	mica	Mica	3 mg/m3	Not Available	Not Available	Not Available
Canada - Alberta Occupational Exposure Limits	mica	Mica Respirable	3 mg/m3	Not Available	Not Available	Not Available
Canada - British Columbia Occupational Exposure Limits	mica	Mica, Respirable	3 mg/m3	Not Available	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	silica crystalline - quartz	Silica - Crystalline# : Quartz (respirable fraction++)	0.05 mg/m3	Not Available	Not Available	T20
Canada - Saskatchewan Occupational Health and Safety Regulations - Designated Chemical Substances	silica crystalline - quartz	Silica crystalline (respirable size)	Not Available	Not Available	Not Available	Not Available
Canada - Northwest Territories Occupational Exposure Limits (English)	silica crystalline - quartz	Silica - Quartz (Respirable Mass) / Silica - Silica Flour (Respirable Mass)	0.1 mg/m3 / 0.05 mg/m3	Not Available	Not Available	Not Available
Canada - Nova Scotia Occupational Exposure Limits	silica crystalline - quartz	Silica, Crystalline - Quartz	0.025 mg/m3	Not Available	Not Available	TLV Basis: pulmonary fibrosis; lung cancer
Canada - Prince Edward Island Occupational Exposure Limits	silica crystalline - quartz	Silica, crystalline - α-quartz and cristobalite	0.025 mg/m3	Not Available	Not Available	TLV® Basis: Pulm fibrosis; lung cancer

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Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	silica crystalline - quartz	Quartz / Silica - Crystalline, Quartz	0.1 mg/m3	Not Available	Not Available	Not Available
Canada - Alberta Occupational Exposure Limits	silica crystalline - quartz	Silica-Crystalline, Respirable particulate - Quartz	0.025 mg/m3	Not Available	Not Available	Not Available
Canada - British Columbia Occupational Exposure Limits	silica crystalline - quartz	Silica, Crystalline - alpha quartz and Cristobalite, Respirable	0.025 mg/m3	Not Available	Not Available	Not Available
Canada - Ontario Occupational Exposure Limits	silica crystalline - quartz	*Silica, Crystalline - Quartz/Tripoli	0.10 mg/m3	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
gamet natural	Particulate material (PNOS)	30 mg/m3	330 mg/m3	2000 mg/m3
mica	Mica; (mica silicates)	9 mg/m3	99 mg/m3	590 mg/m3
silica crystalline - quartz	Silica, crystalline-quartz; (Silicon dioxide)	0.025 mg/m3	0.025 mg/m3	0.025 mg/m3

Ingredient	Original IDLH	Revised IDLH
hornblende	Not Available	Not Available
gamet natural	N.E. mg/m3 / N.E. ppm	500 mg/m3
mica	N.E. mg/m3 / N.E. ppm	1,500 mg/m3
silica crystalline - quartz	N.E. mg/m3 / N.E. ppm	50 mg/m3

Exposure controls

Appropriate engineering controls	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> <p>Local exhaust ventilation usually required.</p>
Personal protection	
Eye and face protection	<ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly.
Skin protection	See Hand protection below
Hands/feet protection	<p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</p> <ul style="list-style-type: none"> ▶ frequency and duration of contact, ▶ chemical resistance of glove material, ▶ glove thickness and ▶ dexterity <p>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</p> <ul style="list-style-type: none"> ▶ When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. ▶ When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. ▶ Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C. apron. ▶ Barrier cream. ▶ Skin cleansing cream. ▶ Eye wash unit.
Thermal hazards	Not Available

Recommended material(s)

GLOVE SELECTION INDEX

Respiratory protection

Type AX-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI

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Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

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Material	CPI
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* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Z88 or national equivalent)

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	AX P1 Air-line*	- -	AX PAPR-P1 -
up to 50 x ES	Air-line**	AX P2	AX PAPR-P2
up to 100 x ES	-	AX P3	-
		Air-line*	-
100+ x ES	-	Air-line**	AX PAPR-P3

* - Negative pressure demand ** - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Angular grains; not miscible with water.		
Physical state	Divided Solid	Relative density (Water = 1)	3.4-4.1
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	900-1315	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Applicable
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution	Not Available
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	<p>Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual. There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.</p> <p>Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.</p> <p>If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.</p> <p>Effects on lungs are significantly enhanced in the presence of respirable particles.</p>
Ingestion	Accidental ingestion of the material may be damaging to the health of the individual.

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Skin Contact	There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	There is some evidence to suggest that this material can cause eye irritation and damage in some persons.
Chronic	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Overexposure to respirable dust may cause coughing, wheezing, difficulty in breathing and impaired lung function. Chronic symptoms may include decreased vital lung capacity, chest infections Repeated exposures, in an occupational setting, to high levels of fine- divided dusts may produce a condition known as pneumoconiosis which is the lodgement of any inhaled dusts in the lung irrespective of the effect. This is particularly true when a significant number of particles less than 0.5 microns (1/50,000 inch), are present. Lung shadows are seen in the X-ray. Symptoms of pneumoconiosis may include a progressive dry cough, shortness of breath on exertion (exertional dyspnea), increased chest expansion, weakness and weight loss. As the disease progresses the cough produces a stringy mucous, vital capacity decreases further and shortness of breath becomes more severe. Other signs or symptoms include altered breath sounds, diminished lung capacity, diminished oxygen uptake during exercise, emphysema and pneumothorax (air in lung cavity) as a rare complication.

Hornet Abrasive (TM)	TOXICITY	IRRITATION
	Not Available	Not Available
hornblende	TOXICITY	IRRITATION
	Not Available	Not Available
garnet natural	TOXICITY	IRRITATION
	Not Available	Not Available
mica	TOXICITY	IRRITATION
	Not Available	Not Available
silica crystalline - quartz	TOXICITY	IRRITATION
	Not Available	Nil reported

Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's msds. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

SILICA CRYSTALLINE - QUARTZ	WARNING: For inhalation exposure <u>ONLY</u> : This substance has been classified by the IARC as Group 1: CARCINOGENIC TO HUMANS The International Agency for Research on Cancer (IARC) has classified occupational exposures to respirable (<5 um) crystalline silica as being carcinogenic to humans . This classification is based on what IARC considered sufficient evidence from epidemiological studies of humans for the carcinogenicity of inhaled silica in the forms of quartz and cristobalite. Crystalline silica is also known to cause silicosis, a non-cancerous lung disease. Intermittent exposure produces; focal fibrosis, (pneumoconiosis), cough, dyspnoea, liver tumours. * Millions of particles per cubic foot (based on impinger samples counted by light field techniques). NOTE : the physical nature of quartz in the product determines whether it is likely to present a chronic health problem. To be a hazard the material must enter the breathing zone as respirable particles.
	HORNBLLENDE, GARNET NATURAL, MICA

Acute Toxicity	☹	Carcinogenicity	☹
Skin Irritation/Corrosion	☹	Reproductivity	☹
Serious Eye Damage/Irritation	☹	STOT - Single Exposure	☹
Respiratory or Skin sensitisation	☹	STOT - Repeated Exposure	☹
Mutagenicity	☹	Aspiration Hazard	☹

Legend:
✔ – Data required to make classification available
✘ – Data available but does not fill the criteria for classification
☹ – Data Not Available to make classification

CMR STATUS

Not Applicable

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

SECTION 13 DISPOSAL CONSIDERATIONS**Waste treatment methods**

Product / Packaging disposal	<p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> ▶ Reduction ▶ Reuse ▶ Recycling ▶ Disposal (if all else fails) <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. In most instances the supplier of the material should be consulted.</p> <ul style="list-style-type: none"> ▶ DO NOT allow wash water from cleaning or process equipment to enter drains.
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SECTION 14 TRANSPORT INFORMATION**Labels Required**

Marine Pollutant	NO
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Land transport (TDG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

SECTION 15 REGULATORY INFORMATION**Safety, health and environmental regulations / legislation specific for the substance or mixture**

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.

hornblende(12178-42-6) is found on the following regulatory lists	"Not Applicable"
garnet natural(12178-41-5) is found on the following regulatory lists	"Canada - British Columbia Occupational Exposure Limits", "International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs", "Canada - Prince Edward Island Occupational Exposure Limits", "Canada - Northwest Territories Occupational Exposure Limits (English)", "Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances", "Canada - Ontario Occupational Exposure Limits", "Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits", "Canada - Nova Scotia Occupational Exposure Limits", "Canada - Quebec Permissible Exposure Values for Airborne Contaminants (French)", "Canada - Alberta Occupational Exposure Limits"
mica(12001-26-2) is found on the following regulatory lists	"Canada Domestic Substances List (DSL)", "Canada - British Columbia Occupational Exposure Limits", "Canada - Prince Edward Island Occupational Exposure Limits", "Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits", "Canada - Nova Scotia Occupational Exposure Limits", "Canada Categorization decisions for all DSL substances", "Canada - Quebec Permissible Exposure Values for Airborne Contaminants (French)", "Canada - Alberta Occupational Exposure Limits"
silica crystalline - quartz(14808-60-7) is found on the following regulatory lists	"Canada Domestic Substances List (DSL)", "Canada - British Columbia Occupational Exposure Limits", "Canada - Prince Edward Island Occupational Exposure Limits", "Canada - Saskatchewan Occupational Health and Safety Regulations - Designated Chemical Substances", "Canada - Prince Edward Island Occupational Exposure Limits - Carcinogens", "International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs", "Canada - Northwest Territories Occupational Exposure Limits (English)", "Canada - Ontario Occupational Exposure Limits", "Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits", "Canada - Nova Scotia Occupational Exposure Limits", "Canada Categorization decisions for all DSL substances", "Canada - Quebec Permissible Exposure Values for Airborne Contaminants (French)", "Canada - Alberta Occupational Exposure Limits"

National Inventory	Status
Australia - AICS	N (garnet natural; hornblende)
Canada - DSL	N (garnet natural; hornblende)
China - IECSC	N (hornblende)
Europe - EINEC / ELINCS / NLP	N (garnet natural; mica; hornblende)
Japan - ENCS	N (garnet natural; mica; hornblende)
Korea - KECI	N (hornblende)
New Zealand - NZIoC	N (hornblende)
Philippines - PICCS	N (hornblende)
USA - TSCA	N (garnet natural; mica; hornblende)
Legend:	<i>Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)</i>

SECTION 16 OTHER INFORMATION

Other information**Ingredients with multiple cas numbers**

Name	CAS No
gamet natural	12178-41-5, 12252-51-6, 1302-57-4, 1302-62-1, 1302-68-7, 14567-72-7, 15078-96-3
mica	12001-26-2, 129899-84-9, 61076-94-6
silica crystalline - quartz	122304-48-7, 122304-49-8, 12425-26-2, 1317-79-9, 14808-60-7, 70594-95-5, 87347-84-0

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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