



# SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Product identifier</b>	<b><i>Mid Cal 5</i></b>
<b>Other means of identification</b>	Not available
<b>Recommended use</b>	Modelling Clay
<b>Recommended restrictions</b>	None known.
<b>Manufacturer information</b>	Tucker's Pottery Supplies Inc., Cone Art Kilns Inc. 15 West Pearce Street Richmond Hill, ON L4B 1H6 CA Phone: Toll Free 1-800-304-6185 Phone: 905-889-7705 Emergency Phone Number: 613-996-6666 (CANUTEC)
<b>Supplier</b>	See above.

## 2. Hazards Identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Carcinogenicity	Category 1A
	Specific target organ toxicity, repeated exposure	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>WHMIS 2015 defined hazards</b>	Not classified	
<b>Label elements</b>		
<b>Signal word</b>	Danger	
<b>Hazard statement</b>	May cause cancer. Causes damage to organs through prolonged or repeated exposure.	
<b>Precautionary statement</b>		
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.	
<b>Response</b>	IF exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell.	
<b>Storage</b>	Store locked up.	
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.	
<b>WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)</b>	None known	
<b>WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)</b>	None known	
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.	
<b>Supplemental information</b>	None.	

## 3. Composition/Information on Ingredients

### Mixture

Chemical name	Common name and synonyms	CAS number	%
Kaolin		1332-58-7	51
Crystalline silica		14808-60-7	30
Nepheline syenite		37244-96-5	4

Chemical name	Common name and synonyms	CAS number	%
Cristobalite		14464-46-1	2
Feldspar		68476-25-5	2
Kaolinite		1318-74-7	2
Silica		7631-86-9	2
Titanium oxide		13463-67-7	2

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

#### 4. First Aid Measures

<b>Inhalation</b>	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
<b>Skin contact</b>	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
<b>Eye contact</b>	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
<b>Ingestion</b>	Rinse mouth. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention.
<b>Most important symptoms/effects, acute and delayed</b>	Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

#### 5. Fire Fighting Measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire-fighting equipment/instructions</b>	Use water spray to cool unopened containers.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>Hazardous combustion products</b>	May include and are not limited to: Silicon tetrafluoride. Hydrofluoric acid.

#### 6. Accidental Release Measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.

#### 7. Handling and Storage

<b>Precautions for safe handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. When using, do not eat, drink or smoke. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. When using do not eat or drink.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

## 8. Exposure Controls/Personal Protection

### Occupational exposure limits

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.025 mg/m <sup>3</sup>	Respirable particles.
		0.025 mg/m <sup>3</sup>	Respirable.
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable particles.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m <sup>3</sup>	Respirable.
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m <sup>3</sup>	

#### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m <sup>3</sup>	Respirable.
Kaolinite (CAS 1318-74-7)	TWA	1 mg/m <sup>3</sup>	Respirable.
Silica (CAS 7631-86-9)	TWA	4 mg/m <sup>3</sup>	Total
		1.5 mg/m <sup>3</sup>	Respirable.
Titanium oxide (CAS 13463-67-7)	TWA	3 mg/m <sup>3</sup>	Respirable fraction.
		10 mg/m <sup>3</sup>	Total dust.

#### Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.
Kaolinite (CAS 1318-74-7)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m <sup>3</sup>	

#### Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.05 mg/m <sup>3</sup>	Respirable fraction.
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m <sup>3</sup>	Respirable fraction.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.
Kaolinite (CAS 1318-74-7)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
Nepheline syenite (CAS 37244-96-5)	TWA	10 mg/m <sup>3</sup>	Total dust.
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m <sup>3</sup>	

#### Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.05 mg/m <sup>3</sup>	Total dust.
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m <sup>3</sup>	Respirable dust.
Kaolin (CAS 1332-58-7)	TWA	5 mg/m <sup>3</sup>	Respirable dust.
Silica (CAS 7631-86-9)	TWA	6 mg/m <sup>3</sup>	Respirable dust.
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m <sup>3</sup>	Total dust.

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	PEL	0.05 mg/m3	Respirable dust.
Crystalline silica (CAS 14808-60-7)	PEL	0.05 mg/m3	Respirable dust.
Kaolin (CAS 1332-58-7)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Titanium oxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.

**US. OSHA Table Z-3 (29 CFR 1910.1000)**

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.05 mg/m3	Respirable.
		1.2 mppcf	Respirable.
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.
		5 mg/m3	Respirable fraction.
Kaolin (CAS 1332-58-7)	TWA	15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
		0.8 mg/m3	
Silica (CAS 7631-86-9)	TWA	20 mppcf	
		5 mg/m3	Respirable fraction.
Titanium oxide (CAS 13463-67-7)	TWA	15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.025 mg/m3	Respirable fraction.
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable fraction.
Kaolinite (CAS 1318-74-7)	TWA	1 mg/m3	Respirable fraction.
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3	

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.
Kaolin (CAS 1332-58-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Silica (CAS 7631-86-9)	TWA	6 mg/m3	

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Exposure guidelines**

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear safety glasses with side shields.

**Skin protection**

**Hand protection**

Impervious gloves. Confirm with reputable supplier first.

**Other**

Use of an impervious apron is recommended. As required by employer code.

<b>Respiratory protection</b>	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).
<b>Thermal hazards</b>	Not applicable.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. When using do not eat or drink.

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### 9. Physical and Chemical Properties

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<b>Appearance</b>	Moist mud
<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	grey
<b>Odor</b>	Earthy
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

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### 10. Stability and Reactivity

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<b>Reactivity</b>	This product may react with strong oxidizing agents.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals.
<b>Incompatible materials</b>	Powerful oxidizers. Chlorine.
<b>Hazardous decomposition products</b>	May include and are not limited to: Hydrofluoric acid. Silicon tetrafluoride.

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### 11. Toxicological Information

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<b>Routes of exposure</b>	Inhalation. Eye, Skin contact, Inhalation, Ingestion.
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**Information on likely routes of exposure**

<b>Ingestion</b>	May cause stomach distress, nausea or vomiting.
<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may result in mechanical irritation.

**Symptoms related to the physical, chemical and toxicological characteristics**  
Direct contact with eyes may cause temporary irritation.

**Information on toxicological effects****Acute toxicity**

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Cristobalite (CAS 14464-46-1)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg, 24 Hours, ECHA > 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Mouse	> 15000 mg/kg, HSDB
	Rat	> 22500 mg/kg, HSDB
Crystalline silica (CAS 14808-60-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	500 mg/kg, HSDB, IV only
Feldspar (CAS 68476-25-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Not available	
Kaolin (CAS 1332-58-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 5000 mg/kg, HSDB
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, HSDB 14900 mg/kg, Gelest
Nepheline syenite (CAS 37244-96-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Not available	

Components	Species	Test Results
Silica (CAS 7631-86-9)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg > 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Not available	
	Rat	> 2.1 mg/L, 4 Hours
<i>Oral</i>		
LD50	Mouse	> 3160 mg/kg
	Rat	> 5000 mg/kg > 3300 mg/kg
Titanium oxide (CAS 13463-67-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Rat	> 6.8 mg/L, 4 Hours, ECHA > 3.6 mg/l/4h, ECHA > 3.6 mg/L, 4 Hours, ECHA > 2.3 mg/L, 4 Hours, ECHA 5.1 mg/L, 4 Hours, ECHA 3.4 mg/L, 4 Hours, ECHA
<i>Oral</i>		
LD50	Mouse	> 5000 mg/kg, ECHA
	Rat	> 25000 mg/kg, ECHA > 11000 mg/kg, ECHA > 5000 mg/kg, ECHA > 2000 mg/kg, ECHA
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.	
<b>Exposure minutes</b>	Not available.	
<b>Erythema value</b>	Not available.	
<b>Oedema value</b>	Not available.	
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.	
<b>Corneal opacity value</b>	Not available.	
<b>Iris lesion value</b>	Not available.	
<b>Conjunctival reddening value</b>	Not available.	
<b>Conjunctival oedema value</b>	Not available.	
<b>Recover days</b>	Not available.	
<b>Respiratory or skin sensitization</b>		
<b>Canada - Alberta OELs: Irritant</b>		
Calcium oxide (CAS 1305-78-8)		Irritant
Cristobalite (CAS 14464-46-1)		Irritant
Titanium oxide (CAS 13463-67-7)		Irritant
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic	

**Carcinogenicity**

May cause cancer.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.)

In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003)

According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

High concentrations of pigment-grade (powdered) and ultrafine titanium dioxide (titanium oxide) dust have caused respiratory tract cancer in rats exposed by inhalation and intratracheal instillation.

**ACGIH Carcinogens**

Cristobalite (CAS 14464-46-1) A2 Suspected human carcinogen.  
Crystalline silica (CAS 14808-60-7) A2 Suspected human carcinogen.

**Canada - Alberta OELs: Carcinogen category**

Cristobalite (CAS 14464-46-1) Suspected human carcinogen.  
Crystalline silica (CAS 14808-60-7) Suspected human carcinogen.

**Canada - Manitoba OELs: carcinogenicity**

SILICA, CRYSTALLINE-.ALPHA-.QUARTZ, RESPIRABLE FRACTION (CAS 14808-60-7) Suspected human carcinogen.  
SILICA, CRYSTALLINE-CRISTOBALITE, RESPIRABLE FRACTION (CAS 14464-46-1) Suspected human carcinogen.

**Canada - Quebec OELs: Carcinogen category**

Cristobalite (CAS 14464-46-1) Detected carcinogenic effect in animals.  
Crystalline silica (CAS 14808-60-7) Suspected carcinogenic effect in humans.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Cristobalite (CAS 14464-46-1) Volume 68, Volume 100C 1 Carcinogenic to humans.  
Crystalline silica (CAS 14808-60-7) Volume 68, Volume 100C 1 Carcinogenic to humans.  
Hydrous magnesium silicate (CAS 14807-96-6) Volume 42, Supplement 7, Volume 93 - 3 Not classifiable as to carcinogenicity to humans.  
Silica (CAS 7631-86-9) Volume 93 - 2B Possibly carcinogenic to humans.  
Titanium oxide (CAS 13463-67-7) Volume 68 - 3 Not classifiable as to carcinogenicity to humans.  
Volume 47, Volume 93 - 2B Possibly carcinogenic to humans.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Crystalline silica (CAS 14808-60-7)  
Titanium oxide (CAS 13463-67-7)

**US NTP Report on Carcinogens: Anticipated carcinogen**

Cristobalite (CAS 14464-46-1) Reasonably Anticipated to be a Human Carcinogen.

**US NTP Report on Carcinogens: Known carcinogen**

Cristobalite (CAS 14464-46-1) Known To Be Human Carcinogen.  
Crystalline silica (CAS 14808-60-7) Known To Be Human Carcinogen.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Cristobalite (CAS 14464-46-1) Cancer  
Crystalline silica (CAS 14808-60-7) Cancer

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Teratogenicity** Not available.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Causes damage to organs through prolonged or repeated exposure.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Causes damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects. Prolonged or repeated exposure to fine airborne crystalline silica dust may cause severe scarring of the lungs, a disease called silicosis. Early symptoms of silicosis include cough, mucous production and shortness of breath upon exertion.



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## 12. Ecological Information

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<b>Ecotoxicity</b>	See below		
<b>Ecotoxicological data Components</b>		<b>Species</b>	<b>Test Results</b>
Silica (CAS 7631-86-9)			
Algae	IC50	Algae	440 mg/L, 72 Hours
Crustacea	EC50	Daphnia	7600 mg/L, 48 Hours
Titanium oxide (CAS 13463-67-7)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/L, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/L, 96 hours
<b>Persistence and degradability</b>	No data is available on the degradability of this product.		
<b>Bioaccumulative potential</b>	No data available.		
<b>Mobility in soil</b>	No data available.		
<b>Mobility in general</b>	Not available.		
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

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## 13. Disposal Considerations

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<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## 14. Transport Information

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<b>Transport of Dangerous Goods (TDG) Proof of Classification</b>	In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue.
<b>U.S. Department of Transportation (DOT)</b>	Not regulated as dangerous goods.
<b>Transportation of Dangerous Goods (TDG - Canada)</b>	Not regulated as dangerous goods.

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## 15. Regulatory Information

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<b>Canadian federal regulations</b>	This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.
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**Canada CEPA Schedule I: Listed substance**

Aluminum oxide (CAS 1344-28-1)	Listed.
Cristobalite (CAS 14464-46-1)	Listed.
Hydrous magnesium silicate (CAS 14807-96-6)	Listed.
Kaolin (CAS 1332-58-7)	Listed.
Magnesium oxide (CAS 1309-48-4)	Listed.
Mica group minerals (CAS 12001-26-2)	Listed.
Titanium oxide (CAS 13463-67-7)	Listed.

**Canada DSL Challenge Substances: Listed substance**

Cristobalite (CAS 14464-46-1)	Listed.
Crystalline silica (CAS 14808-60-7)	Listed.

**Canada Priority Substances List (Second List): Listed substance**

Aluminum oxide (CAS 1344-28-1)	Listed.
Hydrous magnesium silicate (CAS 14807-96-6)	Listed.
Kaolin (CAS 1332-58-7)	Listed.
Magnesium oxide (CAS 1309-48-4)	Listed.
Mica group minerals (CAS 12001-26-2)	Listed.
Titanium oxide (CAS 13463-67-7)	Listed.

**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Phosphorus (CAS 7723-14-0) Class A

**WHMIS 2015 Exemptions** Not applicable

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Barium carbonate (CAS 513-77-9) Listed.  
Barium Oxide (bao) (CAS 1304-28-5) Listed.  
Manganese oxide (MnO2) (CAS 1313-13-9) Listed.  
Phosphorus (CAS 7723-14-0) Listed.

**US EPCRA Section 304 Extremely Haz. Subs. & CERCLA Haz. Subs.: Section 304 EHS reportable quantity**

Phosphorus (CAS 7723-14-0) 1 LBS

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Cristobalite (CAS 14464-46-1) Cancer  
Crystalline silica (CAS 14808-60-7) Cancer  
Cristobalite (CAS 14464-46-1) lung effects  
Crystalline silica (CAS 14808-60-7) lung effects  
Cristobalite (CAS 14464-46-1) immune system effects  
Crystalline silica (CAS 14808-60-7) immune system effects  
Cristobalite (CAS 14464-46-1) kidney effects  
Crystalline silica (CAS 14808-60-7) kidney effects

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Manganese oxide (MnO2) (CAS 1313-13-9)  
Phosphorus (CAS 7723-14-0)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**US state regulations** See below

**US - California Hazardous Substances (Director's): Listed substance**

Aluminum oxide (CAS 1344-28-1) Listed.  
Barium carbonate (CAS 513-77-9) Listed.  
Barium Oxide (bao) (CAS 1304-28-5) Listed.  
Calcium oxide (CAS 1305-78-8) Listed.  
Hydrous magnesium silicate (CAS 14807-96-6) Listed.  
Magnesium oxide (CAS 1309-48-4) Listed.  
Manganese oxide (MnO2) (CAS 1313-13-9) Listed.  
Mica group minerals (CAS 12001-26-2) Listed.  
Phosphorus (CAS 7723-14-0) Listed.  
Silica (CAS 7631-86-9) Listed.

**US - Illinois Chemical Safety Act: Listed substance**

Barium carbonate (CAS 513-77-9)  
Barium Oxide (bao) (CAS 1304-28-5)  
Manganese oxide (MnO2) (CAS 1313-13-9)  
Phosphorus (CAS 7723-14-0)

**US - Louisiana Spill Reporting: Listed substance**

Manganese oxide (MnO2) (CAS 1313-13-9) Listed.

Phosphorus (CAS 7723-14-0)	Listed.
<b>US - Minnesota Haz Subs: Listed substance</b>	
Aluminum oxide (CAS 1344-28-1)	Listed.
Barium carbonate (CAS 513-77-9)	Listed.
Barium Oxide (bao) (CAS 1304-28-5)	Listed.
Calcium oxide (CAS 1305-78-8)	Listed.
Cristobalite (CAS 14464-46-1)	Listed.
Crystalline silica (CAS 14808-60-7)	Listed.
Hydrous magnesium silicate (CAS 14807-96-6)	Listed.
Kaolin (CAS 1332-58-7)	Listed.
Magnesium oxide (CAS 1309-48-4)	Listed.
Manganese oxide (MnO <sub>2</sub> ) (CAS 1313-13-9)	Listed.
Mica group minerals (CAS 12001-26-2)	Listed.
Phosphorus (CAS 7723-14-0)	Listed.
Silica (CAS 7631-86-9)	Listed.
Titanium oxide (CAS 13463-67-7)	Listed.
<b>US - New Jersey RTK - Substances: Listed substance</b>	
Aluminum oxide (CAS 1344-28-1)	
Barium carbonate (CAS 513-77-9)	
Barium Oxide (bao) (CAS 1304-28-5)	
Calcium oxide (CAS 1305-78-8)	
Cristobalite (CAS 14464-46-1)	
Crystalline silica (CAS 14808-60-7)	
Hydrous magnesium silicate (CAS 14807-96-6)	
Kaolin (CAS 1332-58-7)	
Magnesium oxide (CAS 1309-48-4)	
Manganese oxide (MnO <sub>2</sub> ) (CAS 1313-13-9)	
Mica group minerals (CAS 12001-26-2)	
Phosphorus (CAS 7723-14-0)	
Silica (CAS 7631-86-9)	
Titanium oxide (CAS 13463-67-7)	
<b>US - New York Release Reporting: Acutely Hazardous Substances: Listed substance</b>	
Phosphorus (CAS 7723-14-0)	Listed.
<b>US - North Carolina Toxic Air Pollutants: Listed substance</b>	
Manganese oxide (MnO <sub>2</sub> ) (CAS 1313-13-9)	
<b>US - Texas Effects Screening Levels: Listed substance</b>	
Aluminum oxide (CAS 1344-28-1)	Listed.
Barium carbonate (CAS 513-77-9)	Listed.
Calcium oxide (CAS 1305-78-8)	Listed.
Cristobalite (CAS 14464-46-1)	Listed.
Crystalline silica (CAS 14808-60-7)	Listed.
Feldspar (CAS 68476-25-5)	Listed.
Hydrous magnesium silicate (CAS 14807-96-6)	Listed.
Kaolin (CAS 1332-58-7)	Listed.
Magnesium oxide (CAS 1309-48-4)	Listed.
Manganese oxide (MnO <sub>2</sub> ) (CAS 1313-13-9)	Listed.
Mica group minerals (CAS 12001-26-2)	Listed.
Nepheline syenite (CAS 37244-96-5)	Listed.
Phosphorus (CAS 7723-14-0)	Listed.
Silica (CAS 7631-86-9)	Listed.
Titanium oxide (CAS 13463-67-7)	Listed.
<b>US. Massachusetts RTK - Substance List</b>	
Aluminum oxide (CAS 1344-28-1)	
Calcium oxide (CAS 1305-78-8)	
Cristobalite (CAS 14464-46-1)	
Crystalline silica (CAS 14808-60-7)	
Hydrous magnesium silicate (CAS 14807-96-6)	
Kaolin (CAS 1332-58-7)	
Magnesium oxide (CAS 1309-48-4)	
Mica group minerals (CAS 12001-26-2)	
Phosphorus (CAS 7723-14-0)	
Silica (CAS 7631-86-9)	
Titanium oxide (CAS 13463-67-7)	
<b>US. New Jersey Worker and Community Right-to-Know Act</b>	
Aluminum oxide (CAS 1344-28-1)	
Barium carbonate (CAS 513-77-9)	
Barium Oxide (bao) (CAS 1304-28-5)	
Manganese oxide (MnO <sub>2</sub> ) (CAS 1313-13-9)	
Phosphorus (CAS 7723-14-0)	

**US. Pennsylvania Worker and Community Right-to-Know Law**

- Aluminum oxide (CAS 1344-28-1)
- Barium carbonate (CAS 513-77-9)
- Barium Oxide (bao) (CAS 1304-28-5)
- Calcium oxide (CAS 1305-78-8)
- Cristobalite (CAS 14464-46-1)
- Crystalline silica (CAS 14808-60-7)
- Hydrous magnesium silicate (CAS 14807-96-6)
- Kaolin (CAS 1332-58-7)
- Magnesium oxide (CAS 1309-48-4)
- Manganese oxide (MnO2) (CAS 1313-13-9)
- Mica group minerals (CAS 12001-26-2)
- Phosphorus (CAS 7723-14-0)
- Silica (CAS 7631-86-9)
- Titanium oxide (CAS 13463-67-7)

**US. Rhode Island RTK**

- Aluminum oxide (CAS 1344-28-1)
- Barium carbonate (CAS 513-77-9)
- Barium Oxide (bao) (CAS 1304-28-5)
- Calcium oxide (CAS 1305-78-8)
- Cristobalite (CAS 14464-46-1)
- Crystalline silica (CAS 14808-60-7)
- Hydrous magnesium silicate (CAS 14807-96-6)
- Kaolin (CAS 1332-58-7)
- Magnesium oxide (CAS 1309-48-4)
- Mica group minerals (CAS 12001-26-2)
- Phosphorus (CAS 7723-14-0)
- Titanium oxide (CAS 13463-67-7)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

- Crystalline silica (CAS 14808-60-7) Listed: October 1, 1988
- Titanium oxide (CAS 13463-67-7) Listed: September 2, 2011

**Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**16. Other Information**

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	* 2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



**Disclaimer**

The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

**Issue date** 20-February-2018

**Version #** 01

**Effective date** 20-February-2018

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**Other information** For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.