

## 1. Product and Company Identification

Product identifier	<b>681T Floating Rose</b>
Other means of identification	Not available
Recommended use	Glazing pottery
Recommended restrictions	None known
Manufacturer information	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)
Supplier	See above.

## 2. Hazards Identification

Physical hazards	<b>Not classified.</b>	
Health hazards	Acute toxicity, inhalation	Category 4
	Serious eye damage/eye irritation	Category 2
	Carcinogenicity	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, repeated exposure	Category 1
Environmental hazards	<b>Not classified.</b>	
WHMIS 2015 defined hazards	<b>Not classified</b>	
Label elements		
Signal word	<b>Danger</b>	
Hazard statement	<b>Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. May cause cancer. Causes damage to organs through prolonged or repeated exposure.</b>	
Precautionary statement		
Prevention	Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid breathing dust. Do not eat, drink or smoke when using this product.	
Response	<b>IF IN EYES:</b> Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. <b>IF INHALED:</b> Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. <b>IF exposed or concerned:</b> Get medical advice/attention	
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.	
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.	
WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known	
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known	
Hazard(s) not otherwise classified (HNOC)	None known.	
Supplemental information	None	

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### 3. Composition/Information on Ingredients

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#### Mixture

Chemical name	Common name and synonyms	CAS number	%
Crystalline silica		14808-60-7	34
Feldspar		68476-25-5	19
Frits, chemicals		65997-18-4	19
Kaolin		1332-58-7	11
Kaolinite		1318-74-7	8
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated		102184-95-2	5
Hydrous magnesium silicate		14807-96-6	4
Mica group minerals		12001-26-2	2
Barium carbonate		513-77-9	0.4

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

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### 4. First Aid Measures

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<b>Inhalation</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists. Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<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>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Coughing. 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.

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### 5. Fire Fighting Measures

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<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<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: Oxides of carbon. Oxides of sulfur.

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### 6. Accidental Release Measures

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<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. Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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**Methods and materials for containment and cleaning up**

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.

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## 7. Handling and Storage

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**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe dust. Avoid contact with eyes. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Avoid prolonged exposure. Wear appropriate personal protective equipment. Should be handled in closed systems, if possible. Wash thoroughly after handling. Observe good industrial hygiene practices. Use good industrial hygiene practices in handling this material. When using do not eat or drink.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

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## 8. Exposure Controls/Personal Protection

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

Components	Type	Value	Form
Barium carbonate (CAS 513-77-9)	TWA	0.5 mg/m <sup>3</sup>	
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable particles.
Hydrous magnesium silicate (CAS 14807-96-6)	TWA	2 mg/m <sup>3</sup>	Respirable particles.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m <sup>3</sup>	Respirable.
Mica group minerals (CAS 12001-26-2)	TWA	3 mg/m <sup>3</sup>	Respirable.
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)	TWA	0.002 mg/m <sup>3</sup>	Respirable.

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

Components	Type	Value	Form
Barium carbonate (CAS 513-77-9)	TWA	0.5 mg/m <sup>3</sup>	
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
Hydrous magnesium silicate (CAS 14807-96-6)	TWA	2 mg/m <sup>3</sup>	Respirable.
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.
Mica group minerals (CAS 12001-26-2)	TWA	3 mg/m <sup>3</sup>	Respirable.
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)	TWA	0.01 mg/m <sup>3</sup>	
		0.002 mg/m <sup>3</sup>	Respirable.

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

Components	Type	Value	Form
Barium carbonate (CAS 513-77-9)	TWA	0.5 mg/m3	
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Hydrous magnesium silicate (CAS 14807-96-6)	TWA	2 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.
Mica group minerals (CAS 12001-26-2)	TWA	3 mg/m3	Respirable fraction.
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)	TWA	0.01 mg/m3	
		0.002 mg/m3	Respirable fraction.

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

Components	Type	Value	Form
Barium carbonate (CAS 513-77-9)	TWA	0.5 mg/m3	
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable fraction.
Hydrous magnesium silicate (CAS 14807-96-6)	TWA	2 fibers/ml	
		2 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.
Mica group minerals (CAS 12001-26-2)	TWA	3 mg/m3	Respirable fraction.
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)	TWA	0.01 mg/m3	
		0.002 mg/m3	Respirable fraction.

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

Components	Type	Value	Form
Barium carbonate (CAS 513-77-9)	TWA	0.5 mg/m3	
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable dust.
Hydrous magnesium silicate (CAS 14807-96-6)	TWA	3 mg/m3	Respirable dust.
Kaolin (CAS 1332-58-7)	TWA	5 mg/m3	Respirable dust.
Mica group minerals (CAS 12001-26-2)	TWA	3 mg/m3	Respirable dust.
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)	TWA	0.025 mg/m3	

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

Components	Type	Value
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)	TWA	0.005 mg/m3

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

Components	Type	Value	Form
Barium carbonate (CAS 513-77-9)	PEL	0.5 mg/m3	
Crystalline silica (CAS 14808-60-7)	PEL	0.05 mg/m3	Respirable dust.

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

Components	Type	Value	Form
Kaolin (CAS 1332-58-7)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

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

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.
Hydrous magnesium silicate (CAS 14807-96-6)	TWA	0.1 mg/m3	Respirable.
		20 mppcf	
Kaolin (CAS 1332-58-7)	TWA	2.4 mppcf	Respirable.
		5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Mica group minerals (CAS 12001-26-2)	TWA	50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
		20 mppcf	

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Barium carbonate (CAS 513-77-9)	TWA	0.5 mg/m3	
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Hydrous magnesium silicate (CAS 14807-96-6)	TWA	2 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.
Mica group minerals (CAS 12001-26-2)	TWA	3 mg/m3	Respirable fraction.
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)	TWA	0.01 mg/m3	
		0.002 mg/m3	Respirable fraction.

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

Components	Type	Value	Form
Barium carbonate (CAS 513-77-9)	TWA	0.5 mg/m3	
Crystalline silica (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.
Hydrous magnesium silicate (CAS 14807-96-6)	TWA	2 mg/m3	Respirable.
Kaolin (CAS 1332-58-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Mica group minerals (CAS 12001-26-2)	TWA	3 mg/m3	Respirable.

**Biological limit values**

**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)	5 µg/g	Cadmium	Creatinine in urine	*
	5 µg/l	Cadmium	Blood	*

\* - For sampling details, please see the source document.

**Exposure guidelines**

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

<b>Appropriate engineering controls</b>	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. Provide eyewash station. Ensure adequate ventilation.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Impervious gloves. Confirm with reputable supplier first.
<b>Other</b>	Wear suitable protective clothing. 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>	Powder
<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Beige.
<b>Odor</b>	Not available.
<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.
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<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: Oxides of carbon. Oxides of sulfur.

## 11. Toxicological Information

**Routes of exposure** Eye, Skin contact, Inhalation, Ingestion.

**Information on likely routes of exposure**

<b>Ingestion</b>	May cause stomach distress, nausea or vomiting.
<b>Inhalation</b>	Harmful if inhaled.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Causes serious eye irritation.

**Symptoms related to the physical, chemical and toxicological characteristics** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Coughing.

**Information on toxicological effects**

**Acute toxicity** Harmful if inhaled. May cause respiratory irritation.

Components	Species	Test Results
<b>Barium carbonate (CAS 513-77-9)</b>		
<b>Acute</b>		
<i>Oral</i>		
LD	Mouse	200 mg/kg
	Rabbit	170 - 300 mg/kg
LD50	Mouse	200 mg/kg
	Rat	100 - 300 mg/kg
		418 mg/kg
	Wild Norway rat	1480 mg/kg
<b>Crystalline silica (CAS 14808-60-7)</b>		
<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
<b>Feldspar (CAS 68476-25-5)</b>		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Not available	
<b>Frits, chemicals (CAS 65997-18-4)</b>		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Mouse	> 9 mg/m3, 15 Minutes, ECHA
	Mouse, Rat	> 1 mg/m3, 3 Hours, ECHA
	Rabbit	> 22.4 mg/m3, 15 Minutes, ECHA

Components	Species	Test Results
	Rat	> 4.5 mg/m <sup>3</sup> , 2 Hours, ECHA > 8.6 mg/m <sup>3</sup> , 30 Minutes, ECHA > 4.6 mg/m <sup>3</sup> , 3 Hours, ECHA > 4.5 mg/m <sup>3</sup> , 2 Hours, ECHA > 1.9 mg/L, 4 Hours, ECHA 112 mg/m <sup>3</sup> , 2 Hours, ECHA 4.4 mg/L, 4 Hours, ECHA 2.2 mg/L, 4 Hours, ECHA
<i>Oral</i> LD50	Mouse	890 mg/kg, ECHA 63 mg/kg, ECHA
	Mouse, Rat	41 mg/kg, ECHA 7.7 mg/kg, ECHA
	Rat	> 11000 mg/kg, ECHA > 5000 mg/kg, ECHA > 2000 mg/kg, ECHA 63 - 259 mg/kg, ECHA 9990 mg/kg, ECHA 8796 mg/kg, ECHA 2330 mg/kg, ECHA 314 mg/kg, ECHA 300 - 2000 mg/kg, ECHA 221 mg/kg, ECHA
Hydrous magnesium silicate (CAS 14807-96-6)		
<b>Acute</b>		
<i>Dermal</i> LD50	Rat	> 2000 mg/kg, ECHA
<i>Inhalation</i> LC50	Rat	> 2.1 mg/L, 4 h, ECHA
<i>Oral</i> LD50	Rat	> 5000 mg/kg, ECHA
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
Mica group minerals (CAS 12001-26-2)		
<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
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Rat	> 5.1 mg/L, 4 Hours, ECHA
<i>Oral</i>		
LD50	Rat	> 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>	Causes serious eye 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>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.	
<b>Carcinogenicity</b>	<p>May cause cancer.</p> <p>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.)</p> <p>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)</p> <p>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.</p>	
<b>ACGIH Carcinogens</b>		
Crystalline silica (CAS 14808-60-7)		A2 Suspected human carcinogen.
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)		A2 Suspected human carcinogen.
<b>Canada - Alberta OELs: Carcinogen category</b>		
Crystalline silica (CAS 14808-60-7)		Suspected human carcinogen.
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)		Suspected human carcinogen.
<b>Canada - Manitoba OELs: carcinogenicity</b>		
CADMIUM AND COMPOUNDS, AS CD, RESPIRABLE FRACTION (CAS 102184-95-2)		Suspected human carcinogen.
SILICA, CRYSTALLINE-.ALPHA.-QUARTZ, RESPIRABLE FRACTION (CAS 14808-60-7)		Suspected human carcinogen.
<b>Canada - Quebec OELs: Carcinogen category</b>		
Crystalline silica (CAS 14808-60-7)		Suspected carcinogenic effect in humans.
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)		Suspected carcinogenic effect in humans.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
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.

Volume 93 - 2B Possibly carcinogenic to humans.

Volume 58, Volume 100C 1 Carcinogenic to humans.

Silicic Acid, Zirconium Salt, Cadmium  
Pigment-encapsulated (CAS 102184-95-2)

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

Crystalline silica (CAS 14808-60-7)

Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)

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

Crystalline silica (CAS 14808-60-7)

Known To Be Human Carcinogen.

Silicic Acid, Zirconium Salt, Cadmium

Known To Be Human Carcinogen.

Pigment-encapsulated (CAS 102184-95-2)

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

Crystalline silica (CAS 14808-60-7)

Cancer

Silicic Acid, Zirconium Salt, Cadmium

Cancer

Pigment-encapsulated (CAS 102184-95-2)

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Teratogenicity</b>	Not available.
<b>Specific target organ toxicity - single exposure</b>	May cause respiratory irritation.
<b>Specific target organ toxicity - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. 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. Fibrosis was observed in rats exposed to 6 mg/m <sup>3</sup> of hydrous magnesium silicate (talc) for 113 or 122 weeks. Chronic respiratory disease has been observed in workers exposed to up to 3.0 mg/m <sup>3</sup> of airborne talc ore free of asbestos and silica.

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## 12. Ecological Information

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**Ecotoxicity** See below

**Ecotoxicological data**

**Components**

**Species**

**Test Results**

Barium carbonate (CAS 513-77-9)

**Aquatic**

Fish

LC50

Western mosquitofish (*Gambusia affinis*) 6950 mg/L, 96 hours

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

**Mobility in soil** No data available.

**Mobility in general** Not available.

**Other adverse effects** 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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**Disposal instructions** 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.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** 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).

**Contaminated packaging** 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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**Transport of Dangerous Goods (TDG) Proof of Classification** 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.

**General** IMDG Regulated Marine Pollutant.

**U.S. Department of Transportation (DOT)**

Not regulated as dangerous goods.

**Transportation of Dangerous Goods (TDG - Canada)**

Not regulated as dangerous goods.

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**15. Regulatory Information**

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**Canadian federal regulations** 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.**Canada CEPA Schedule I: Listed substance**

Hydrous magnesium silicate (CAS 14807-96-6)	Listed.
Kaolin (CAS 1332-58-7)	Listed.
Mica group minerals (CAS 12001-26-2)	Listed.
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)	Listed.

**Canada DSL Challenge Substances: Listed substance**

Crystalline silica (CAS 14808-60-7)	Listed.
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**Canada Priority Substances List (Second List): Listed substance**

Hydrous magnesium silicate (CAS 14807-96-6)	Listed.
Kaolin (CAS 1332-58-7)	Listed.
Mica group minerals (CAS 12001-26-2)	Listed.

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

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Not regulated.

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

Crystalline silica (CAS 14808-60-7)	Cancer
Silicic Acid, Zirconium Salt, Cadmium	Cancer
Pigment-encapsulated (CAS 102184-95-2)	
Crystalline silica (CAS 14808-60-7)	lung effects
Silicic Acid, Zirconium Salt, Cadmium	Lung
Pigment-encapsulated (CAS 102184-95-2)	
Crystalline silica (CAS 14808-60-7)	immune system effects
Silicic Acid, Zirconium Salt, Cadmium	Kidney
Pigment-encapsulated (CAS 102184-95-2)	
Crystalline silica (CAS 14808-60-7)	kidney effects
Silicic Acid, Zirconium Salt, Cadmium	Acute toxicity
Pigment-encapsulated (CAS 102184-95-2)	

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

<b>Hazard categories</b>	Immediate Hazard - Yes
	Delayed Hazard - Yes
	Fire Hazard - No
	Pressure Hazard - No
	Reactivity Hazard - No

<b>SARA 302 Extremely hazardous substance</b>	No
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<b>SARA 311/312 Hazardous chemical</b>	No
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**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Silicic Acid, Zirconium Salt, Cadmium	102184-95-2	5
Pigment-encapsulated		

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

Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)

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**

Barium carbonate (CAS 513-77-9)	Listed.
Hydrous magnesium silicate (CAS 14807-96-6)	Listed.
Mica group minerals (CAS 12001-26-2)	Listed.
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)	Listed.

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

Barium carbonate (CAS 513-77-9)

**US - Michigan Critical Materials Register: Parameter number**

Silicic Acid, Zirconium Salt, Cadmium	CADMIUM
Pigment-encapsulated (CAS 102184-95-2)	

**US - Minnesota Haz Subs: Listed substance**

Barium carbonate (CAS 513-77-9)	Listed.
Crystalline silica (CAS 14808-60-7)	Listed.
Hydrous magnesium silicate (CAS 14807-96-6)	Listed.
Kaolin (CAS 1332-58-7)	Listed.
Mica group minerals (CAS 12001-26-2)	Listed.

**US - New Jersey RTK - Substances: Listed substance**

Barium carbonate (CAS 513-77-9)  
Crystalline silica (CAS 14808-60-7)  
Hydrous magnesium silicate (CAS 14807-96-6)  
Kaolin (CAS 1332-58-7)  
Mica group minerals (CAS 12001-26-2)  
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)

**US - Pennsylvania RTK - Hazardous Substances: Special hazard**

Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)

**US - Texas Effects Screening Levels: Listed substance**

Barium carbonate (CAS 513-77-9)	Listed.
Crystalline silica (CAS 14808-60-7)	Listed.
Feldspar (CAS 68476-25-5)	Listed.
Frits, chemicals (CAS 65997-18-4)	Listed.
Hydrous magnesium silicate (CAS 14807-96-6)	Listed.
Kaolin (CAS 1332-58-7)	Listed.
Mica group minerals (CAS 12001-26-2)	Listed.
Silicic Acid, Zirconium Salt, Cadmium	Listed.
Pigment-encapsulated (CAS 102184-95-2)	

**US - Washington Chemical of High Concern to Children: Listed substance**

Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)

**US. Massachusetts RTK - Substance List**

Crystalline silica (CAS 14808-60-7)  
Hydrous magnesium silicate (CAS 14807-96-6)  
Kaolin (CAS 1332-58-7)  
Mica group minerals (CAS 12001-26-2)

**US. New Jersey Worker and Community Right-to-Know Act**

Barium carbonate (CAS 513-77-9)  
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)

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

Barium carbonate (CAS 513-77-9)  
Crystalline silica (CAS 14808-60-7)  
Hydrous magnesium silicate (CAS 14807-96-6)  
Kaolin (CAS 1332-58-7)  
Mica group minerals (CAS 12001-26-2)  
Silicic Acid, Zirconium Salt, Cadmium Pigment-encapsulated (CAS 102184-95-2)

**US. Rhode Island RTK**

Barium carbonate (CAS 513-77-9)  
Crystalline silica (CAS 14808-60-7)  
Hydrous magnesium silicate (CAS 14807-96-6)  
Kaolin (CAS 1332-58-7)  
Mica group minerals (CAS 12001-26-2)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

- US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**  
 Crystalline silica (CAS 14808-60-7) Listed: October 1, 1988  
 Silicic Acid, Zirconium Salt, Cadmium Listed: October 1, 1987  
 Pigment-encapsulated (CAS 102184-95-2)
- US - California Proposition 65 - CRT: Listed date/Developmental toxin**  
 Silicic Acid, Zirconium Salt, Cadmium Listed: May 1, 1997  
 Pigment-encapsulated (CAS 102184-95-2)
- US - California Proposition 65 - CRT: Listed date/Male reproductive toxin**  
 Silicic Acid, Zirconium Salt, Cadmium Listed: May 1, 1997  
 Pigment-encapsulated (CAS 102184-95-2)

**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	No

\*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.

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**Prepared by**

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**Other information**

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