

## 1. Product and Company Identification

<b>Product identifier</b>	<b>678T Variegated Blue</b>
<b>Other means of identification</b>	Not available
<b>Recommended use</b>	Glazing pottery
<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>	Serious eye damage/eye irritation	Category 2
	Sensitization, respiratory	Category 1
	Sensitization, skin	Category 1
	Carcinogenicity	Category 1A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	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>	Causes serious eye irritation. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. 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 eat, drink or smoke when using this product. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust. Contaminated work clothing should not be allowed out of the workplace. Wear respiratory protection. Use only outdoors or in a well-ventilated area.
<b>Response</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. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see information on this label). Take off contaminated clothing and wash it before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor IF exposed or concerned: Get medical advice/attention. Call a POISON CENTER/doctor if you feel unwell.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. 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	%
Feldspar		68476-25-5	52
Crystalline silica		14808-60-7	14
Limestone		1317-65-3	11
Nepheline syenite		37244-96-5	6
Carbonic acid, magnesium salt (1:1)		546-93-0	5
Kaolin		1332-58-7	4
Olivine, Cobalt Silicate Blue		68187-40-6	4
Chemical frits		65997-18-4	3
Titanium oxide		13463-67-7	0.2

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 INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
<b>Skin contact</b>	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see information on this label). Take off contaminated clothing and wash it before reuse.
<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. Dusts may irritate the respiratory tract, skin and eyes. Coughing. Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash. 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. Wash contaminated clothing before reuse. 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: Oxides of carbon. Hydrofluoric acid. Silicon tetrafluoride.

## 6. Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe 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.

**Methods and materials for containment and cleaning up**

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Minimize dust generation and accumulation. Collect dust using a vacuum cleaner equipped with HEPA filter. 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. 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.

## 7. Handling and Storage

**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. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. 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.

## 8. Exposure Controls/Personal Protection

**Occupational exposure limits**

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

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable particles.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable.
Limestone (CAS 1317-65-3)	TWA	10 mg/m3	
Olivine, Cobalt Silicate Blue (CAS 68187-40-6)	TWA	0.02 mg/m3	
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3	

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

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable.
Limestone (CAS 1317-65-3)	STEL	20 mg/m3	Total dust.
	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Total dust.
Olivine, Cobalt Silicate Blue (CAS 68187-40-6)	TWA	0.02 mg/m3	
Titanium oxide (CAS 13463-67-7)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Total dust.

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

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

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

Components	Type	Value	Form
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable fraction.
Olivine, Cobalt Silicate Blue (CAS 68187-40-6)	TWA	0.02 mg/m3	
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3	

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

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable fraction.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable fraction.
Nepheline syenite (CAS 37244-96-5)	TWA	10 mg/m3	Total dust.
Olivine, Cobalt Silicate Blue (CAS 68187-40-6)	TWA	0.02 mg/m3	
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3	

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

Components	Type	Value	Form
Carbonic acid, magnesium salt (1:1) (CAS 546-93-0)	TWA	10 mg/m3	Total dust.
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable dust.
Kaolin (CAS 1332-58-7)	TWA	5 mg/m3	Respirable dust.
Limestone (CAS 1317-65-3)	TWA	10 mg/m3	Total dust.
Olivine, Cobalt Silicate Blue (CAS 68187-40-6)	TWA	0.02 mg/m3	
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3	Total dust.

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

Components	Type	Value	Form
Carbonic acid, magnesium salt (1:1) (CAS 546-93-0)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total 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.
Limestone (CAS 1317-65-3)	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
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable.
Kaolin (CAS 1332-58-7)	TWA	2.4 mppcf	Respirable.
		5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
Titanium oxide (CAS 13463-67-7)	TWA	15 mppcf	Respirable fraction.
		5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable fraction.
Olivine, Cobalt Silicate Blue (CAS 68187-40-6)	TWA	0.02 mg/m3	
Titanium oxide (CAS 13463-67-7)	TWA	10 mg/m3	

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

Components	Type	Value	Form
Carbonic acid, magnesium salt (1:1) (CAS 546-93-0)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
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
Limestone (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total

**Biological limit values****ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Olivine, Cobalt Silicate Blue (CAS 68187-40-6)	15 µg/l	Cobalt	Urine	*

\* - 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.

**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 (or goggles).

**Skin protection****Hand protection**

Impervious gloves. Confirm with reputable supplier first.

**Other**

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. As required by employer code.

**Respiratory protection**

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).

**Thermal hazards**

Not applicable.

**General hygiene considerations**

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. Contaminated work clothing should not be allowed out of the workplace. When using do not eat or drink.

**9. Physical and Chemical Properties**

<b>Appearance</b>	Powder.
<b>Physical state</b>	Solid.
<b>Form</b>	Powder.
<b>Color</b>	grey
<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.
<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>	Contact with incompatible materials. Do not mix with other chemicals.
<b>Incompatible materials</b>	Acids. Powerful oxidizers. Fluorine. Chlorine.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of carbon. Silicon tetrafluoride. Hydrofluoric acid.

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## 11. Toxicological Information

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<b>Routes of exposure</b>	Eye, Skin contact, Inhalation, Ingestion.
<b>Information on likely routes of exposure</b>	
<b>Ingestion</b>	May cause stomach distress, nausea or vomiting.
<b>Inhalation</b>	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Dust may irritate respiratory system.
<b>Skin contact</b>	Dust or powder may irritate the skin. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Dusts may irritate the respiratory tract, skin and eyes. Coughing. Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash.

### Information on toxicological effects

**Acute toxicity** May cause respiratory irritation. May cause an allergic skin reaction.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Carbonic acid, magnesium salt (1:1) (CAS 546-93-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50		Not available
<i>Inhalation</i>		
LC50		Not available

Components	Species	Test Results
<i>Oral</i> LD50	Not available Rat	> 2000 mg/kg, ECHA
Chemical frits (containing lead) (CAS 65997-18-4)		
<b>Acute</b>		
<i>Dermal</i> LD50	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i> LC50	Mouse Mouse, Rat Rabbit  Rat	> 9 mg/m3, 15 Minutes, ECHA > 1 mg/m3, 3 Hours, ECHA > 22.4 mg/m3, 15 Minutes, ECHA > 4.5 mg/m3, 2 Hours, ECHA > 8.6 mg/m3, 30 Minutes, ECHA > 4.6 mg/m3, 3 Hours, ECHA > 4.5 mg/m3, 2 Hours, ECHA > 1.9 mg/L, 4 Hours, ECHA 112 mg/m3, 2 Hours, ECHA 4.4 mg/L, 4 Hours, ECHA 2.2 mg/L, 4 Hours, ECHA
<i>Oral</i> LD50	Mouse  Mouse, Rat  Rat	890 mg/kg, ECHA 63 mg/kg, ECHA 41 mg/kg, ECHA 7.7 mg/kg, ECHA > 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
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	

Components	Species	Test Results
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
Limestone (CAS 1317-65-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	6450 mg/kg, SPI Pharma
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	
Olivine, Cobalt Silicate Blue (CAS 68187-40-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Rat	> 5.3 mg/L, 4 Hours, ECHA
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg, ECHA 1830 mg/kg, ECHA 1630 mg/kg, ECHA 1480 mg/kg, ECHA
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



Components	Species	Test Results
		> 2000 mg/kg, ECHA
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.	
Exposure minutes	Not available.	
Erythema value	Not available.	
Oedema value	Not available.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.	
Corneal opacity value	Not available.	
Iris lesion value	Not available.	
Conjunctival reddening value	Not available.	
Conjunctival oedema value	Not available.	
Recover days	Not available.	
<b>Respiratory or skin sensitization</b>		
<b>Canada - Alberta OELs: Irritant</b>		
Cristobalite (CAS 14464-46-1)	Irritant	
Limestone (CAS 1317-65-3)	Irritant	
Titanium oxide (CAS 13463-67-7)	Irritant	
<b>Respiratory sensitization</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
<b>Skin sensitization</b>	May cause an allergic skin reaction.	
<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.</p> <p>Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.</p> <p>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.</p>	
<b>ACGIH Carcinogens</b>		
Cristobalite (CAS 14464-46-1)	A2 Suspected human carcinogen.	
Crystalline silica (CAS 14808-60-7)	A2 Suspected human carcinogen.	
Olivine, Cobalt Silicate Blue (CAS 68187-40-6)	A3 Confirmed animal carcinogen with unknown relevance to humans.	
<b>Canada - Alberta OELs: Carcinogen category</b>		
Cristobalite (CAS 14464-46-1)	Suspected human carcinogen.	
Crystalline silica (CAS 14808-60-7)	Suspected human carcinogen.	
<b>Canada - Manitoba OELs: carcinogenicity</b>		
Cobalt and inorganic compounds, as Co (CAS 68187-40-6)	Confirmed animal carcinogen with unknown relevance to humans.	
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.	
<b>Canada - Quebec OELs: Carcinogen category</b>		
Cristobalite (CAS 14464-46-1)	Detected carcinogenic effect in animals.	
Crystalline silica (CAS 14808-60-7)	Suspected carcinogenic effect in humans.	
Olivine, Cobalt Silicate Blue (CAS 68187-40-6)	Detected carcinogenic effect in animals.	

**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.  
Olivine, Cobalt Silicate Blue (CAS 68187-40-6) Volume 52 - 2B Possibly carcinogenic to humans.  
Titanium oxide (CAS 13463-67-7) 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** May cause respiratory irritation.  
**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 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.

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**12. Ecological Information**

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**Ecotoxicity** See below

**Ecotoxicological data**

Components		Species	Test Results
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

**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.

**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**

Cristobalite (CAS 14464-46-1) Listed.  
Kaolin (CAS 1332-58-7) 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**

Kaolin (CAS 1332-58-7) Listed.  
Titanium oxide (CAS 13463-67-7) 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)**

Olivine, Cobalt Silicate Blue (CAS 68187-40-6) Listed.

**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**

Olivine, Cobalt Silicate Blue (CAS 68187-40-6)

**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**

Olivine, Cobalt Silicate Blue (CAS 68187-40-6) Listed.

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

Olivine, Cobalt Silicate Blue (CAS 68187-40-6)

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

Olivine, Cobalt Silicate Blue (CAS 68187-40-6) Listed.

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

Carbonic acid, magnesium salt (1:1) (CAS 546-93-0) Listed.

Cristobalite (CAS 14464-46-1) Listed.

Crystalline silica (CAS 14808-60-7) Listed.

Kaolin (CAS 1332-58-7) Listed.

Limestone (CAS 1317-65-3) Listed.

Olivine, Cobalt Silicate Blue (CAS 68187-40-6) Listed.

Titanium oxide (CAS 13463-67-7) Listed.

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

Carbonic acid, magnesium salt (1:1) (CAS 546-93-0)

Cristobalite (CAS 14464-46-1)

Crystalline silica (CAS 14808-60-7)

Kaolin (CAS 1332-58-7)

Limestone (CAS 1317-65-3)

Olivine, Cobalt Silicate Blue (CAS 68187-40-6)

Titanium oxide (CAS 13463-67-7)

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

Carbonic acid, magnesium salt (1:1) (CAS 546-93-0) Listed.

Chemical frits (containing lead) (CAS 65997-18-4) Listed.

Cristobalite (CAS 14464-46-1) Listed.

Crystalline silica (CAS 14808-60-7) Listed.

Feldspar (CAS 68476-25-5) Listed.

Kaolin (CAS 1332-58-7) Listed.

Limestone (CAS 1317-65-3) Listed.

Nepheline syenite (CAS 37244-96-5) Listed.

Titanium oxide (CAS 13463-67-7) Listed.

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

Olivine, Cobalt Silicate Blue (CAS 68187-40-6)

**US. Massachusetts RTK - Substance List**

Carbonic acid, magnesium salt (1:1) (CAS 546-93-0)

Cristobalite (CAS 14464-46-1)

Crystalline silica (CAS 14808-60-7)

Kaolin (CAS 1332-58-7)

Limestone (CAS 1317-65-3)

Titanium oxide (CAS 13463-67-7)

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

Olivine, Cobalt Silicate Blue (CAS 68187-40-6)

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

Cristobalite (CAS 14464-46-1)

Crystalline silica (CAS 14808-60-7)

Kaolin (CAS 1332-58-7)

Limestone (CAS 1317-65-3)

Olivine, Cobalt Silicate Blue (CAS 68187-40-6)

Titanium oxide (CAS 13463-67-7)

**US. Rhode Island RTK**

Carbonic acid, magnesium salt (1:1) (CAS 546-93-0)

Cristobalite (CAS 14464-46-1)

Crystalline silica (CAS 14808-60-7)

Kaolin (CAS 1332-58-7)

Limestone (CAS 1317-65-3)

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**

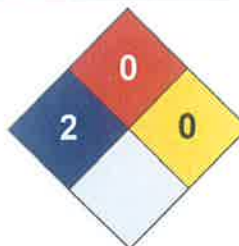
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*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.

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01

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### Prepared by

Dell Tech Laboratories Ltd. Phone: (519) 858-5021

### Other information

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