



# MATERIAL SAFETY DATA SHEET

<b>SECTION 1. Chemical Product and Company Identification</b>			
<b>Product Name:</b>	Unfired Cordierite	<b>Chemical Name:</b>	Cordierite
<b>Supplier:</b>	Superior Technical Ceramics Corp. 600 Industrial Park Road St. Albans, VT 05478 (802) 527-7726 phone (802) 527-1181 fax	<b><u>In Case of Emergency Call:</u></b>  (802) 527-7726	
<b>Synonym:</b>	Unfired ("green") cordierite		
<b>Material Use:</b>	Raw material for technical ceramic components.		
<b>Date Prepared:</b>	May 6, 2009		
<b>Prepared By:</b>	Brian H. Gold		

<b>SECTION 2. Composition, Information or Ingredients</b>			
NAME:	CAS#:	% BY WEIGHT	COMMENTS:
Magnesium Oxide	1309-48-4	15-20	All oxides present as cordierite ternary compound; 2MgO, 2Al <sub>2</sub> O <sub>3</sub> , 5SiO <sub>2</sub>
Aluminum Oxide	1344-28-1	25-35	All oxides present as cordierite ternary compound; 2MgO, 2Al <sub>2</sub> O <sub>3</sub> , 5SiO <sub>2</sub>
Silicon Oxide	7631-86-9	50-60	All oxides present as cordierite ternary compound; 2MgO, 2Al <sub>2</sub> O <sub>3</sub> , 5SiO <sub>2</sub>
Organic Binders		1-5	Proprietary

<b>SECTION 3. Hazards Identification</b>			
<b>Emergency Overview:</b>			
Organic portion may be combustible. Dust may cause irritation to eyes, nose, throat, and/or skin.			
<b>Health Rating:</b>	<b>Flammability Rating:</b>	<b>Reactivity Rating:</b>	<b>Contact Rating:</b>
2 – Moderate	0 – None	0 – None	2 – Moderate
<b>Lab Protective Equipment:</b>	Eye protection and proper dust collection if machining occurs.		
<b>Storage Color Code:</b>	Green (General Storage)		



# MATERIAL SAFETY DATA SHEET

Potential Health Effects:	
<b>Inhalation:</b>	Hazard is principally that of a nuisance dust only as a byproduct of machining. Coughing or shortness of breath may occur in cases of excessive inhalation.
<b>Ingestion:</b>	No adverse effects expected.
<b>Skin Contact:</b>	No adverse effects expected but dust may cause irritation.
<b>Eye Contact:</b>	No adverse effects expected but dust may cause irritation.
<b>Chronic Exposure:</b>	No adverse effects expected.
<b>Aggravation of Pre-existing Conditions:</b>	Not expected to be a health hazard.

SECTION 4. First Aid Measures	
<b>Inhalation:</b>	Move to fresh air and consult with local medical personnel if discomfort persists.
<b>Ingestion:</b>	Administer water to dilute, but not if person is unconscious. Consult with local medical personnel if discomfort persists.
<b>Eye Contact:</b>	Flush with tepid water for a minimum of 15 minutes and consult with local medical personnel if discomfort persists.
<b>Skin Contact:</b>	Wash affected area with soap and water and consult with local medical personnel if irritation persists.

SECTION 5. Fire-Fighting Measures	
<b>Fire:</b>	Possible Class A fire hazard – combustible vapors can develop in the headspace over the product. Flash point is 220°C (428°F).
<b>Explosion:</b>	Not considered an explosion hazard.
<b>Fire Extinguishing Media:</b>	Use any means suitable for extinguishing surrounding fire.
<b>Special Information:</b>	Use protective clothing and breathing equipment appropriate for the surrounding fire and to protect against the aluminum oxide dust that may be dispersed in the air.

SECTION 6. Accidental Release Measures	
Any dust from machining should be wet mopped or dry vacuumed.	

SECTION 7. Handling and Storage	
Any dust from machining should be wet mopped or dry vacuumed.	



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<b>SECTION 8. Exposure Controls and Personal Protection</b>	
<b>Airborne Exposure Limits:</b>	10 mg/m <sup>3</sup> TWA matter containing <1% crystalline silica (only applicable if dust is generated from machining).
<b>Ventilation System:</b>	Local or general exhaust ventilation recommended.
<b>Personal Respirators (NIOSH Approved):</b>	NIOSH/MSHA approved respirator for dust when exposure limit is exceeded.
<b>Skin Protection:</b>	Polymer gloves for prolonged dust exposure.
<b>Eye Protection:</b>	Safety goggles in the presence of airborne dust.

<b>SECTION 9. Physical and Chemical Properties</b>			
<b>Appearance:</b>	Gray/tan chalky solid	<b>pH:</b>	NIA
<b>Odor:</b>	Odorless	<b>Boiling Point:</b>	NIA
<b>Solubility:</b>	Organic Portion Soluble in Water	<b>Melting Point:</b>	1460°C (2660°F)
<b>Specific Gravity:</b>	<1.9 g/cc	<b>Vapor Pressure/ Vapor Density:</b>	NIA

<b>SECTION 10. Stability and Reactivity</b>					
<b>Chemical Stability:</b>		Stable			
<b>Hazardous Decomposition:</b>		CO and CO <sub>2</sub> in a fire and at temperatures >220°C (428°F).			
<b>Hazardous Polymerization:</b>	NIA	<b>Incompatibilities:</b>	NIA	<b>Conditions to Avoid:</b>	NIA

<b>SECTION 11. Toxicological Information</b>
NIA

<b>SECTION 12. Ecological Information</b>
NIA

<b>SECTION 13. Disposal Considerations</b>
This material is not hazardous per 40 CFR 261. Consultation with federal, state and local officials is recommended before disposal.

<b>SECTION 14. Transport Information</b>
Not regulated.