



MATERIAL SAFETY DATA SHEET

SECTION 1 - MATERIAL IDENTIFICATION AND USE

MATERIAL: CORDIERITE/MULLITE REFRACTORY
PRODUCT NAME - IDENTIFIER: CERAMIC REFRACTORY

MANUFACTURER NAME:		SUPPLIER NAME:	
Apogee Ceramics Inc.		Apogee Ceramics Inc.	
STREET ADDRESS: 71 Folsetter Drive		STREET ADDRESS: 71 Folsetter Drive	
CITY: Paris, Ontario	COUNTRY: Canada	CITY: Paris, Ontario	COUNTRY: Canada
POSTAL CODE: N3L 0E2	PHONE: 519-442-3636	POSTAL CODE: N3L 0E2	PHONE: 519-442-3636

CHEMICAL NAME: Magnesium Alumino- Silicate		CHEMICAL FAMILY: Cordierite (Talc)	CHEMICAL FORMULA: MgO-Al ₂ O ₃ - SiO ₂	
MOLECULAR WEIGHT:		MATERIAL USE: MANUFACTURING END USE		
Chemical Name	CAS Number	%	ACGIH / TLV	OSHA / PEL

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	UN. NA OR CASE NUMBERS:	LD/50 OF MATERIAL:
N/A	N/A	N/A	N/A
<p>All refractory formulations contain ball clay, and/or kaolin as principle ingredients. Airborne crystalline silica (quartz) in the ball clay and kaolin is the most hazardous component, although in most cases its % is low and the airborne dust is not fine enough to be normally respirable. The talcs used in the formulations are of the nonasbestiform.</p> <p>The degree of hazard regarding respirable quartz and talc in these formulations is reduced to near nil due to the addition of oils and water in the mixing process. In such cases, the dry ingredients are bound by the liquids and pelletized, rendering them non-airborne. For information on dry mixes i.e. wastes, spills, refer to MSDS on Dried Clay Mixtures.</p>			

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SECTION 3 - PHYSICAL DATA

PHYSICAL STATE: GAS () LIQUID () SOLID (X)		ODOUR AND APPEARANCE: ODOURLESS/YELLOW WHITE		ODOUR THRESHOLD (PPM): N/A
VAPOUR PRESSURE (mm Hg): N/A	FREEZING POINT (°C): N/A	VAPOUR DENSITY (AIR-1): N/A	EVAPORATION RATE: N/A	BOILING POINT (°C): N/A
% VOLATILE (BY VOL.): N/A	SOLUBILITY IN WATER (20 °C): N/A	BULK DENSITY: 1.33 g/cc. TYPICAL	SPECIFIC GRAVITY: 2.55 g/cc	COEFFICIENT WATER OIL DIST: N/A

SECTION 4 - FIRE AND EXPLOSIVE DATA

FLAMMABILITY YES () NO (X): IF YES, UNDER WHICH CONDITIONS?			
MEANS OF EXTINCTION:			
SPECIAL PROCEDURE:			
FLASH POINT (°C) AND METHOD: N/A	UPPER EXPLOSION (% BY VOLUME): N/A	LOWER EXPLOSION LIMIT (% BY VOL.): N/A	
AUTO IGNITION TEMPERATURE (°C): N/A	TDG FLAMMABILITY CLASSIFICATION: N/A	HAZARDOUS COMBUSTION PRODUCTS: N/A	
EXPLOSION DATA: SENSITIVITY TO IMPACT: N/A	SENSITIVITY TO STATIC DISCHARGE: N/A	EXPLOSIVE POWER: N/A	RATE OF BURNING: N/A

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY YES (X), NO () IF NO UNDER WHICH CONDITIONS?	
COMPATIBILITY WITH OTHER SUBSTANCES YES (X), NO () IF NO, WHICH ONES?	
REACTIVITY UNDER WHICH CONDITIONS:	NON-REACTIVE
HAZARDOUS DECOMPOSITION PRODUCTS:	N/A



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SECTION 6 - TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY:			
SKIN CONTACT ()	SKIN ABSORPTION ()	EYE CONTACT ()	INHALATION ACUTE (X) INHALATION CHRONIC (X) INGESTION ()
EFFECTS OF ACUTE EXPOSURE TO MATERIAL: NO EFFECT OTHER THAN AS NUISANCE DUST (WHEN MACHINING IS REQUIRED).			
EFFECTS OF CHRONIC EXPOSURE: LONG TERM EXPOSURE TO RESPIRABLE CRYSTALLINE SILICA CAN CAUSE SILICOSIS.			
LD/50 OF MATERIAL: N/A	LC/50 OF MATERIAL: N/A	EXPOSURE LIMIT OF MATERIAL: 5 mg/m ³	IRRITANCY OF MATERIAL: N/A
SENSITIZING CAPABILITY OF MATERIAL: N/A	CARCINOGENICITY OF MATERIAL: N/A	REPRODUCTIVE EFFECTS OF MATERIAL: N/A	SYNERGISTIC MATERIALS: N/A

SECTION 7 - PREVENTIVE MEASURES
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PERSONAL PROTECTIVE EQUIPMENT: RESPIRATOR RECOMMENDED WHEN DUST IS CREATED DUE TO MACHINING OF FIRED CERAMICS. PROTECTIVE EYE WEAR, GLOVES RECOMMENDED IN CASE OF BROKEN FRAGMENTS.		
GLOVES (SPECIFY): SEE ABOVE	RESPIRATORY (SPECIFY): WHERE TLV IS EXCEEDED	EYE (SPECIFY): SEE ABOVE
FOOTWEAR (SPECIFY): N/A	CLOTHING (SPECIFY): N/A	OTHER (SPECIFY): N/A
ENGINEERING CONTROLS (SPECIFY E.G. VENTILATION ENCLOSED PROCESS): N/A		
LEAK AND SPILL PROCEDURE: N/A		
WASTE DISPOSAL: N/A		
HANDLING PROCEDURES AND EQUIPMENT: N/A		
STORAGE REQUIREMENTS: N/A		
SPECIAL SHIPPING INFORMATION: N/A		



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SECTION 8 - FIRST AID MEASURES

NOTE: IN CASE OF EYE INJURY OR SEVERE CUTS FROM SHARP BROKEN CERAMIC FRAGMENTS CONSULT PHYSICIAN IMMEDIATELY.

SOURCES USED:

ADDITIONAL INFORMATION:

SECTION 9 - PREPARATION DATE OF THE MSDS

PREPARED BY (GROUP, DEPARTMENT, ETS)	PHONE NUMBER:	DATE PREPARED:
Apogee Ceramics Inc.	519-442-3636	Mar. 9, 2020