

MARYLAND REFRACTORIES COMPANY

Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

Product name Cordierite Grog

Recommended use: Ceramic Products

Manufacturer/Supplier: Maryland Refractories Company
267 Salisbury Road
Irondale, Ohio 43932

Emergency Phone Number: Day: (330) 532-9845, (800) 228-4672
Night: (740) 544-5933 (330) 277-7878

Section 2: Hazard (s) Identification

Classification:

Physical

Not Hazardous

Health

Specific Target Organ Toxicity – Repeat Exposure
Category 1
Carcinogen Category 1A

Labeling:

Danger!



Hazard Statements:

May cause cancer by inhalation
Causes damage to lungs through prolonged or repeated exposure

Precautionary Statements:

Do not handle until all safety precautions have been read and understood
Do not breathe dust
Wash thoroughly after handling
Do not eat, drink or smoke when using this product
In case of inadequate ventilation wear respiratory protection
Dispose of contents and container in accordance with local and national regulations

Section 3: Composition / Information on Ingredients

<u>Chemical Name</u>	<u>Cas No.</u>	<u>Concentration</u>
SiO ₂		50-56%
Quartz	14808-60-7	
Tridymite	15468-32-3	
Cristobalite	14464-46-1	
Al ₂ O ₃	1344-28-1	33-39%
MgO		6-10%
Fe ₂ O ₃	1309-37-1	< 2%
TiO ₂	13463-67-7	< 2%

Section 4: First Aid Measures

Eye Contact:	Flush with clean water for 15 minutes. If irritation occurs, consult physician.
Skin Contact:	Wash with soap and water. If irritation occurs, consult physician.
Inhalation:	Remove to fresh air. Seek medical attention.
Ingestion:	Contact physician immediately. Do not induce vomiting unless instructed to do so by physician. Product is nontoxic as supplied, but its abrasive nature could damage internal organs.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media:	Use media appropriate for the surrounding fire
Specific Hazards arising from the chemical:	Product will not burn under fire conditions
Precautions for Firefighters:	Wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire exposed container with water

Section 6: Accidental Release Measures

Personal Precautions:	Not required.
Small/Large Spill:	For broken shapes or fragments, sweep, shovel, or pickup and place in a container for disposal.
Methods for Clean Up:	Dispose contaminated material as waste according to item 13. Ensure adequate ventilation

Section 7: Handling and Storage

Handling:	Prevent formation of dust. Ensure proper ventilation. Keep respiratory protective device available.
Storage:	Store in a dry place away from extreme heat. Product is non-flammable

Section 8: Exposure Controls / Personal Protection

Exposure Guidelines:

Crystalline Silica, Quartz	<u>10mg/m3</u>	TWA OSHA PEL (Respirable fraction)
	% SiO ₂ + 2	
	<u>30mg/m3</u>	TWA OSHA PEL (Total dust)
	% SiO ₂ + 2	
	0.025 mg/m3	TWA ACHIH TLV (Respirable)
Crystalline Silica, Cristobalite	<u>10mg/m3</u>	TWA OSHA PEL (Respirable)
	2(% Silica +2)	
	0.025 mg/m3	TWA ACHIH TLV (Respirable)
Aluminum Oxide	5mg/m3	TWA (respirable), 15 mg/m3 TWA (total dust) OSHA PEL
Titanium Dioxide	15mg/m3	TWA (total dust) OSHA PEL
	10mg/m3	TWA ACGIH TLV
Iron Oxide	10mg/m3	TWA OSHA PEL (as fume)
	5mg/m3	TWA ACGIH TLV (respirable)

Engineering Measures:	General mechanical ventilation is usually adequate.
Eye/Face Protection:	Goggles or safety glasses with side shields should be worn.
Skin and Body Protection:	Impervious gloves and long-sleeved and long-legged clothing should be worn to prevent skin contact.
Respiratory Protection:	Use a NIOSH approved respirator when working around material
Work/Hygienic Practices:	Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating or drinking.

Section 9: Physical and Chemical Properties

Appearance:	Cream to Buff
Auto ignition:	Product is not self igniting.
Physical State:	Solid
Odor:	None.
PH:	7
Water Solubility:	Insoluble.
Flash Point:	Not applicable.
Explosion Limits:	Product does not present an explosion hazard.
Boiling Point/Range:	Not Applicable.
Melting Point/Range:	Not Applicable

Section 10: Stability and Reactivity

Reactivity:	Not expected to be reactive
Chemical Stability:	Stable under normal conditions of use
Possibility of Hazardous Reactions:	None Known
Conditions to Avoid:	None Known
Incompatible Material:	Product can react with concentrated acids

Section 11: Toxicological Information

Eye Contact:	Dust may cause mechanical irritation with redness, tearing and pain
Skin Contact:	Dust may cause mechanical irritation with redness, itching and inflammation
Inhalation:	Inhalation of dust may cause mucous membrane and upper respiratory tract irritation, coughing, sneezing and difficulty in breathing
Ingestion:	Swallowing may cause gastrointestinal irritation
Chronic Effects:	Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis.

Carcinogenicity: Crystalline silica, quartz and cristobalite are listed by IARC as "Carcinogenic to Humans: (Group 1) and as "Known to Be a Human Carcinogen" by NTP. Titanium Dioxide is listed by IARC as "Possibly Carcinogenic to Humans", Group 2B. None of the other ingredients listed as carcinogens by IARC, NTP, or OSHA

are

Reproductive Effects: None of the components have shown to cause reproductive or developmental toxicity in animals or humans

Mutagenic Effects: None of the components have shown to cause mutagenicity activity

Section 12: Ecological Information

Ecotoxicological/chemical fate information: not available.

Section 13: Disposal Considerations

Dispose in accordance with all local, state and federal regulations.

Section 14: Transport Information

U.S.A. DOT:	Not Regulated.
Canadian TDG:	Not Regulated.
Additional information:	Not dangerous according to available information.

Section 15: Regulatory Information

International Inventories

TSCA: This substance or all the ingredients of this product are on the Chemical Substances Inventory of the Toxic Substances Control Act (TSCA Inventory). The presence on this list does not require any legal reporting.

DSL: All Components Listed

US Federal Regulations

SARA 313: No material listed in the components in Section 3 of this MSDS is on the SARA 313 list

California: California Proposition 65: This product contains crystalline silica, chemical known to the State of California to cause cancer.

Other States: Crystalline silica products are not known to be regulated by states other than California; however, state and local OSHA and EPA regulations may apply to these products. Contact your local agency if in doubt.

WHMIS Hazard Class

Class D - Division 2 -Sub Division A: Untested mixture containing a very toxic material

Class D -Division 2 -Sub Division B: Untested mixture containing a toxic material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Section 16: Other Information

MSDS Status: Replaces all prior MSDS.

Note: This material safety data sheet contains confidential proprietary information and is not to be disclosed to the general public or to competition except as required by law. The information accumulated herein is believed to be accurate but is not warranted to be, whether originating with Maryland Refractories Co. or not. This information is offered solely for use in your evaluation of this product in respect to safety, health, and environmental hazards