

2004
Visual Arts

MATERIAL SAFETY DATA SHEET

MARYLAND REFRACTORIES COMPANY
P.O. BOX 267, SALISBURY ROAD
IRONDALE, OH 43932

Emergency Phone Numbers

Day (330) 532-9845, (800) 228-4672
Night (614) 544-5872, (330) 532-9840, (330) 532-4204

Trade Name: High Duty Grog
Date revised: 9/15/97
Revised by: R. T. Oxnard

SECTION I - PRODUCT IDENTIFICATION

Chemical Name: Alumina Silicate
Common Name: Fireclay, Calcined

SECTION II - CHEMICAL COMPOSITION

Ingredient	Typical %	CAS#	OSHA PEL	IARC Carcinogen
SiO2	48-56			
Quartz		14808-60-7	10mg/m3 % quartz + 2	Y
Tridymite		15468-32-3	1/2 of quartz PEL	
Cristobalite		14464-46-1	1/2 of quartz PEL	Y
Amorphous				
AL2O3	35-45	1344-28-1	10.0mg/m3	
Fe2O3	< 4			
CaO	< 3			
TiO2	< 4			

SECTION III - PHYSICAL DATA

Appearance and Odor: Buff colored granular product, odorless.

SECTION IV - FIRE AND EXPLOSION DATA

This product will not support combustion and may be used as an extinguishing media.

SECTION V - HEALTH HAZARD

Breathing dust is a health hazard. See above PEL (Permissible Exposure Level) for free crystalline silica.

Route of entry: Inhalation

Effects of overexposure: Cancer and Silicosis. The hazard associated with crystalline silica occurs when fine dust is inhaled into the lungs over an extended time period.

SECTION VI - REACTIVITY DATA

Stability and Reactivity: This product is stable and is not reactive.
Hazardous Decomposition: None

SECTION VII - SPILL AND LEAKS PROCEDURES

Spills and leaks should be cleaned up and disposed of by a procedure that will eliminate the generation of respirable dust. Dampening the material with water before sweeping or vacuuming with a HEPA filter can accomplish this.

SECTION VIII - INDUSTRIAL HYGIENE INFORMATION

Ventilation: Local Exhaust and dust collection should be maintained to keep respirable dust exposure below PEL.

Protective Clothing: NIOSH/MSHA approved respirators with a minimum rating equal to the PEL should be worn when exposures exceed the PEL.

Protective Clothing: Clothing should be cleaned in a manner that avoids the generation of respirable dust. Clothing should not be cleaned with an air hose.

SECTION IX - SPECIAL PRECAUTIONS

Special Precaution: Proper ventilation and breathing protection should be used in dusty areas.

Precautionary Labeling: Long-term exposure to airborne dust in excess of permissible exposure limits without proper respiratory protection may create cancer risks.

SECTION X - SPECIAL INFORMATION

- A. The OSHA Hazard Communication Standard requires that manufacturers report any new significant information regarding the potential health hazard of chemicals in their workplace. In July 1997, The International Agency for Research on Cancer (IARC) published Monograph 68, which classifies respirable crystalline silica in the form of quartz and cristobalite as a Group 1 carcinogen.

This product contains greater than 0.1 percent crystalline silica. Therefore it is important to prevent worker exposure to respirable dust in excess of the Permissible Exposure Level (PEL). Someone qualified to make such evaluations such as an Industrial Hygienist should determine workers' exposure. Until it is determined to be otherwise, workers exposed to any dust should wear NIOSH/MSHA approved respiratory protection devices while working with this product.

The IARC evaluation includes the following

There is *sufficient evidence* in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources

There is *inadequate evidence* in humans for the carcinogenicity of amorphous silica

There is *sufficient evidence* in experimental animals for the carcinogenicity of quartz and cristobalite.

There is *limited evidence* in experimental animals for the carcinogenicity of tridymite.

There is *inadequate evidence* in experimental animals for the carcinogenicity of uncalcined diatomaceous earth.

There is *inadequate evidence* in experimental animals for the carcinogenicity of synthetic amorphous silica.

Overall evaluation

In making the overall evaluation, the Working Group noted that carcinogenicity in humans 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.

Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources *is carcinogenic to humans (Group 1)*.

- B. Silica and Alumina are listed as hazardous on the OSHA Z-Table and TLV list.