

SPINKS CLAY COMPANY, INC.

P.O. BOX 820
 PARIS, TN 38242
 ph. (901) 642-5414 fax (901) 642-5493

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION

PRODUCT: Ball Clay (CAS# 1332-58-7) EMERGENCY TELEPHONE NUMBER: (901) 642-5414
 TRADE NAME: Various*
 CHEMICAL NAME: Hydrous Aluminum Silicate
 CHEMICAL FAMILY: Kaolinite
 FORMULA: $Al_2O_3 \cdot 2SiO_2 \cdot 2H_2O$ + impurities. DATE REVISED: June, 1996

* The information contained in this MSDS is applicable to all of Spinks' non-slurry ball clay product line

HAZARDOUS INGREDIENTS

COMPONENT	CAS#	PERCENT	ACGIH-TLV	OSHA-PEL
Crystalline Silica (Quartz)	14808-60-7	5-36%	0.1 mg/m ³ (respirable)	0.1 mg/m ³ (respirable)
Respirable Particulate (clay dust)			3.0 mg/m ³	5.0 mg/m ³

The exposure limits are based on a TWA for an eight (8) hour shift/ 40 hour week.

PHYSICAL AND CHEMICAL PROPERTIES

ROUTES OF ENTRY	HEALTH EFFECTS
EYES:	Contact may cause irritation and temporary discomfort.
INHALATION:	Symptoms of acute exposure include coughing, wheezing, difficult breathing, and upper respiratory track irritation. Prolonged and repeated exposure to concentrations in excess of the TLV or PEL may contribute to delayed respiratory complications.
INGESTION:	No information available.
SKIN:	None expected, but constant contact may cause irritation.

CARCINOGENICITY INFORMATION:

OSHA REGULATED: No NTP LISTED: Yes IARC LISTED: Yes

WARNING! This product contains crystalline silica. IARC Monograph Volume 42, 1987 concludes that "there is limited evidence for the carcinogenicity of crystalline silica to humans". IARC classification - Group 2A.

The National Toxicology Program (NTP), in the Seventh Annual Report on Carcinogens, 1994, has included crystalline silica in its list of substances that are "reasonably anticipated to be carcinogens".

NIOSH has identified crystalline silica as a *Potential Occupational Carcinogen* using the OSHA classification outlined in 29 CFR 1910.103.

SAFETY AND EMERGENCY PROCEDURES

INHALATION:	Move away from exposure into fresh air conditions.
EYE CONTACT:	Flush with water immediately. Consult a physician if irritation persists.
IF SWALLOWED:	Consult a physician.
SKIN CONTACT:	Wash with mild soap and water.

PHYSICAL AND CHEMICAL CHARACTERISTICS

APPEARANCE:	A solid of various shades of white, gray and black		
ODOR:	Earthy odor		
BOILING POINT:	NA	VAPOR PRESSURE:	NA
MELTING POINT:	NA	VAPOR DENSITY:	NA
SPECIFIC GRAVITY:	2.58	EVAPORATION RATE:	NA
SOLUBILITY IN WATER:	Insoluble	PERCENT VOLATILITY:	NA
PH:	NA	VISCOSITY:	NA

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: Non-Flammable	SPECIAL FIREFIGHTING PROCEDURES: None
EXTINGUISHING MEDIA: NA	UNUSUAL FIRE AND EXPLOSION HAZARDS: None
FLAMMABLE LIMITS: NA	

REACTIVITY DATA

STABILITY:	Stable	INCOMPATIBILITIES:	None
HAZARDOUS DECOMPOSITION:	None	CONDITIONS TO AVOID:	None
HAZARDOUS POLYMERIZATION:	Will not occur		

SPILL AND LEAK RESPONSE AND DISPOSAL INFORMATION

SPILL AND LEAK RESPONSE: Minimize dust generation during cleanup. Vacuum or scoop the material into a container for reclamation or disposal.

WASTE DISPOSAL: Raw (unused) material, as shipped, may be disposed of in a sanitary landfill; However spent material may be contaminated and may require special disposal methods. Consult the proper regulatory authorities.

Ball clay is not listed as a hazardous waste as defined by 40 CFR, Part 261.

SPECIAL HANDLING AND PERSONAL PROTECTION INFORMATION

Avoid unnecessary product agitation to keep dust level to a minimum.
 Local exhaust ventilation is recommended for dust generating processes.
 Use NIOSH or MSHA approved respirators if dust concentrations exceed the TLV or PEL.
 Eye wash stations are recommended in areas where this product is used.
 Floors or surfaces covered with this product become extremely slippery when wet.

SPECIAL REGULATORY INFORMATION

Ball Clay is subject to the reporting requirements of EPCRA (SARA Title III), as outlined in 40 CFR, Part 370.
 Ball Clay is included on the TSCA inventory as a naturally occurring chemical substance, 40 CFR, Part 710.4(b).
 Ball Clay is not regulated by the DOT.

To the best of our knowledge the information contained herein is accurate. However there is no warranty of any kind expressed or implied, as to the completeness or accuracy thereof. Final determination of the suitability of this information for a particular use of this product is the sole responsibility of the user.

M.K. O'G 10/10/01M
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20148M

MATERIAL SAFETY DATA SHEET

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

Emergency Phone Number
Day (216) 532-9845
Night (412) 269-9633

Date Revised: 1/1/95
Trade Name: High Duty Grog

***** SECTION I - PRODUCT IDENTIFICATION *****

Chemical Name: Alumina Silicate
Chemical Family: Fireclay

***** SECTION II - CHEMICAL COMPOSITION *****

Silica*	more than 50%	CAS# "S 14464-46-1, 15468-32-3
Alumina*	more than 35%	
Iron Oxide	less than 2%	
Titania	less than 2%	

*(Some of this combines to form fireclay.)

***** 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 *****

TLV for free crystalline silica 0.1 mg/m3

Route of Entry: Inhalation

Effects of Overexposure: Silicosis; the hazard associated with crystalline silica occurs when the dust is inhaled and deposited in the small air passages of the lungs. The lung tissue reacts by forming fibrous scar tissue around the dust particles. Such scar tissue prevents the easy interchange of oxygen and carbon dioxide in the lungs. In addition, scar tissue does not stretch as easily as healthy tissue.

***** SECTION VI - REACTIVITY DATA *****

Stability and Reactivity: This product is stable.
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. This can be accomplished by dampening the material with water.

***** SECTION VIII - INDUSTRIAL HYGIENE INFORMATION *****

Ventilation: Local Exhaust and dust collection should be maintained to maintain exposure below TLV.

Respiratory Protection: NIOSH/MSHA approved respirators with a minimum rating equal to the TLV should be worn when exposures exceed the TLV.

Protective Clothing: Clothing should be cleaned in a manner that avoids the generation of respirable dust.

***** SECTION IX - SPECIAL PRECAUTION *****

Special Precautions: 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. A portion of the OSHA Hazard Communication Standard requires that manufacturers, Importees and employers report any new or significant information regarding the potential health hazard of a chemical in their workplace. Therefore, we have included the results of the investigation by The International Agency for Research on Cancer (IARC). They resolved in their research entitled "IARC Monographs on The Evaluation Of The Carcinogenic Risk of Chemicals to Humans, Silica and Some Silicates", Vol. 42 which met in Lyon, France 10-17 June, 1986, that free crystalline silica is a Class 2A carcinogen. Placing silica in Class 2A requires statement of definition on any material MSDS that contains silica. IARC defines a Class 2A carcinogen as follows:

There is sufficient evidence for the carcinogenicity of crystalline silica to experimental animals.

There is inadequate evidence for the carcinogenicity of amorphous silica to experimental animals.

There is limited evidence for the carcinogenicity of crystalline silica to humans.

There is inadequate evidence for the carcinogenicity of amorphous silica to humans.

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