



## MATERIAL SAFETY DATA SHEET

To comply with OSHA's 29 CFR 1910.1200 and Bill No. 70 WHMIS Hazard Communication Standards.

### SECTION I. IDENTITY OF PRODUCT AND PRODUCER

DATE PREPARED: March 1, 1990  
 TRADE NAME: OLD MINE #4

CHEMICAL NAME: Ball Clay, Hydrous Aluminum Silicate  
CAS NUMBER: 1332-58-7

PRODUCER'S NAME AND ADDRESS:  
 Kentucky-Tennessee Clay Company  
 P.O. Box 6002  
 Mayfield, KY 42066

TELEPHONE NUMBERS:  
 502-247-3061  
 502-247-0293 FAX

### SECTION II. HAZARDOUS INGREDIENTS

Free Silica (Quartz)\* Typically 10-30% CAS NUMBER 14808-60-7

\*Ball Clays reported on this company's Material Safety Data Sheet, Form 9003b, contain crystalline silica, as quartz up to 30% dry weight depending on product type. Some of this silica is not fine enough to normally be considered respirable.

### SECTION III. PHYSICAL DATA

FUSION RANGE: 1569-1785° C.  
SOLUBILITY IN WATER: Negligible  
VAPOR PRESSURE: Not Applicable

SPECIFIC GRAVITY: 2.4-2.65  
PERCENT VOLATILE-Below 100° C: None  
pH: 3.5-7.5

ODOR AND APPEARANCE: Earthy odor when wet, raw color light gray to brown

**SECTION IV. FIRE AND EXPLOSION DATA:** Non-flammable

**SECTION V. HEALTH HAZARD DATA**

OSHA PEL:  
 RESPIRABLE CRYSTALLINE QUARTZ (TWA-TLV)=0.1mg/m<sup>3</sup>

ACGIH TLV:  
 RESPIRABLE CRYSTALLINE QUARTZ (TWA-TLV)=0.1mg/m<sup>3</sup>  
 CRISTOBALITE & TRIDYMITE (See STABILITY) (TWA-TLV)=0.05 mg/m<sup>3</sup>

ROUTE OF ENTRY: Inhalation

HEALTH HAZARDS: WARNING: This clay product contains crystalline silica which may cause delayed respiratory disease (silicosis) if inhaled over a prolonged period of time. Avoid breathing dust. Use NIOSH/MSHA approved respirator where TLV for crystalline silica may be exceeded.

IARC Monograph Volume 42, 1987 concludes that "there is limited evidence for the carcinogenicity of crystalline silica to humans." IARC classification 2A.

As of the date of this MSDS, the NTP has not listed crystalline silica as a carcinogen.

FIRST AID: EYES: Flush thoroughly with water for 10 to 15 minutes. Contact physician if irritation persists.

### SECTION VI. REACTIVITY DATA

STABILITY:  
 Ball Clay is stable under ordinary conditions. When exposed to high temperatures, free quartz can change crystal structure to form tridymite (above 870°C) or cristobalite (above 1470°C) which have greater health hazards than quartz.

INCOMPATIBILITY: (Materials to avoid) - None  
HAZARDOUS POLYMERIZATION: Will not occur

## **SECTION VII. SPILL, LEAK, AND DISPOSAL INFORMATION**

### ACTION TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Clean up and collect, minimizing dust.\* Avoid breathing dust. Wear an approved respirator. Avoid using water if possible as product becomes slippery when wet.

### WASTE DISPOSAL METHOD:

Follow federal, state and local regulations for solid waste disposal.\* Under RCRA (40 CFR Part 261) ball clay is not a hazardous waste.

### COMMUNITY RIGHT TO KNOW:

Ball Clay is regulated under EPCRA (SARA Title III). Reports should be made as required by this Act. California's Proposition 65 lists crystalline silica as a carcinogen.

\*Do not exceed recommended PEL or TLV.

OTHER PRECAUTIONS: Product becomes slippery when wet.

## **SECTION VIII. SPECIAL PROTECTION INFORMATION**

VENTILATION: Recommended method.

### RESPIRATORY PROTECTION:

If dust concentrations exceed recommended PEL or TLV for short time durations, use NIOSH/MSHA approved dust respirators. If spraying wet coatings, use NIOSH/MSHA dust/mist respirators.

### EYE PROTECTION:

Wear tight fitting goggles if high dust concentrations exist.

### OTHER:

1. Dust exposure levels in excess of appropriate PEL or TLV should be reduced by feasible engineering and/or administrative controls.
2. It is recommended that the employer obtain a copy of the ASTM E 1132 information package, "Standard Practice for Health Requirements Relating to Occupational Exposure to Quartz Dust."
3. Government regulations require that exposed personnel receive appropriate training in safe work habits when working with crystalline silica where the potential exists for exceeding the PEL or TLV.

## **SECTION IX. SPECIAL PRECAUTIONS**

Minimize dust generation and exposure. Do not breath dust. TWA should not exceed TLV or PEL.

ACGIH recommends periodic physical examinations for those employees who are exposed to respirable crystalline silica levels greater than 50% of the TLV or PEL.

Ball Clay is not hazardous under DOT regulations.

Manufacturers who crush and grind ceramic bodies fired to high temperatures should recognize possible presence of tridymite and/or cristobalite which have greater health hazards than quartz.

Data, information and recommendations recorded herein are believed to be accurate. The Kentucky-Tennessee Clay Company makes no warranty, either expressed or implied, with respect thereto and disclaims all liability from reliance thereon.