

# Material Safety Data Sheet

## HMIS

Health Hazard	1*
Fire Hazard	0
Reactivity	0

\*Indicates a chronic health hazard.

## 1 Product & Company Identification

Manufacturer's Name:	Alsey Refractories Company	Product Name:	Alsey Dry Milled Fireclay
	Highway 106	Product Type:	Ground Fireclay Mineral Refractory
	Alsey, IL 62610	Chemical Family:	Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> (Aluminum Silicate); Al <sub>2</sub> O <sub>3</sub> (Aluminum Oxide)
	Phone: 314-963-7900		

## 2 Hazards Identification

Potential Health Effects	Acute	Chronic
Eyes	Dust or grains can cause mechanical irritation.	None known.
Skin	Flowing material can cause abrasions.	None known.
Inhalation	Dust, if present, may cause upper respiratory irritation.	Long-term exposure to dust may cause lung damage.*
Ingestion	Unknown. Not an expected route of entry.	Unknown.

\*According to Group 1 of the International Agency for Research on Cancer (IARC), there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources.

## 3 Composition/Information of Ingredients

Name	CAS-No	Weight %
alumina silicate (Al <sub>2</sub> O <sub>3</sub> )	1302-93-8	0-36%
crystalline silica total		0-58%
Cristobalite*	14464-46-1	
Quartz*	14808-60-7	
Titanium Dioxide	13463-67-7	0-3.5%
Aluminum Oxide	1344-28-1	0-40%

Quartz & Cristobalite 0.17% chemically combined (calculated estimate)

\*Not mechanically separate from each other or other mineralogical phases in product as supplied.

## 4 First Aid Measures

Eye Contact:	Flush with clean water for 15 minutes. If irritation occurs, consult physician.
Skin Contact:	Wash with soap and warm water. If irritation occurs, consult physician.
Ingestion:	Contact physician immediately. Do not induce vomiting unless instructed to do so by physician. Product is non-toxic as supplied, but its abrasive nature could damage internal organs.
Inhalation:	Remove to fresh air. If breathing difficulty continues, give oxygen & seek medical attention.

## 5 Fire Fighting Measures

Flammable Properties:	None.
Suitable extinguishing agents:	Use fire fighting measures that suit the environment.
Extinguishing Media:	Use extinguishing media appropriate for surrounding media. Not Combustible.
Protective equipment:	No special measures required.
Precautions for Firefighters:	No special instructions.
Unusual Fire & Explosion Hazards:	None.

# Material Safety Data Sheet

## 6 Accidental Release Measures

Personal Precautions: Not required.  
 Small/Large Spill: For broken bags - sweep, shovel or pickup and place in a container for disposal. Clean-up personnel need a NIOSH respirator approved for lung damaging dusts. Sweep spills and vacuum where necessary. Avoid generating dust.  
 Methods for Clean Up: Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

## 7 Handling and Storage

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

## 8 Exposure Controls and Personal Protection

### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL
crystalline silica (cristobalite) 14464-46-1	0.025 R mg/m <sup>3</sup> respirable dust	½ the value calculated from the respirable dust formulae for Quartz
crystalline silica (quartz) 14808-60-7	0.025 R mg/m <sup>3</sup>	10mg/m <sup>3</sup> ÷ % SiO <sub>2</sub> + 2 [STEL/CEIL (C)] respirable dust
Aluminum Oxide (1344-28-1 )	1R mg/m <sup>3</sup>	15 mg/m <sup>3</sup> (total dust); 5mg/m <sup>3</sup> (respirable)
Titanium Dioxide (13463-67-7)	10 mg/m <sup>3</sup>	15 mg/m <sup>3</sup> (total dust)

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. Safety shoes should be worn.  
 Respiratory Protection: Provide workers with NIOSH respirators approved for lung damaging dusts when exposed to dust. Use a NIOSH approved respirator when working around material and when removing this product after service. A respiratory protection program should be implemented if exposures exceed OSHA PELs. Provide local exhaust ventilation to meet exposure limits.

## 9 Physical and Chemical Properties

Appearance:	Gray	Autoignition:	Not Applicable
Physical State:	Powder/granular	Odor:	None
pH:	Not Applicable	Water Solubility:	Slight
Flash Point:	Not Applicable	Specific Gravity:	2.11 g/cc
Boiling Point/Range:	Not Applicable	Melting Point/Range:	3050° F

## 10 Stability and Reactivity

Stability: Product is stable under normal conditions of use, storage, and transportation.  
 Incompatible Products: Product can react with concentrated acids.  
 Conditions to Avoid: Avoid dust formation. Refractories containing crystalline silica may, after service, contain more or less crystalline silica. Care must be taken to avoid and/or control dust from demolition. If in doubt of the proper protection, seek advice from a safety professional.

## 11 Toxicological Information

### Acute Toxicity-- Product Information

Chemical Name	Carcinogenicity Category
crystalline silica (cristobalite) 14464-46-1	IARC-1, MAK-1, NIOSH-Ca, NTP-K, TLV-A2
crystalline silica (quartz) 14808-60-7	IARC-1, MAK-1, NIOSH-Ca, NTP-K, TLV-A2
Aluminum Oxide (1344-28-1 )	MAK-2*, TLV-A4 *fibrous dust
Titanium Dioxide (13463-67-7)	IARC-2B, NIOSH-Ca, TLV-A4

Chronic Toxicity: Excessive inhalation of dust from these products can cause silicosis.  
 Target Organ Effects: Lungs, Eyes, Respiratory system, Skin.

# Material Safety Data Sheet

## 12 Ecological Information

Ecotoxicological/chemical fate information: not available.

## 13 Disposal Considerations

Disposal of Product: As supplied, product may be disposed of in an approved landfill, in accordance with federal, state, and local regulations

Packaging Disposal: Reuse, recycle or treat as industrial waste.

## 14 Transport Information

U.S.A. DOT: Not Regulated. Canadian TDG: Not Regulated.

Additional information: Not dangerous according to available information.

## 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. All Components Listed.

DSL: All Components Listed.

### U.S. 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.

## 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 Alsey 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.

**End of MSDS**