

# MSDS

Material Safety Data Sheet

Kyanite Mining Corporation  
Material Safety Data Sheet #0002

Revised: July 31, 2001  
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## Calcined Kyanite

NFPA Rating Health 3 Flammability 0 Reactivity 0 Pers. Protection E

### SECTION 1: PRODUCT IDENTIFICATION

Trade Name: Calcine Kyanite

Chemical Name: Aluminum Silicate

Chemical Formula:  $3\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$  Molecular Weight: 425.98

Synonyms: Mullite

CASRN: 1302-76-7

Technical Contact:  
Bill Kerber

Telephone Number:  
(434) 983-2085

Emergency Telephone No.:  
(434) 736-8135  
(434) 983-2043

### SECTION 2: HAZARDOUS COMPOSITION

CHEMICAL	CAS No.	RATIO (%)
Alumina*	1344-28-1	54-61%
Silica, Free Crystalline	14808-60-7	2.2%**

\*This component is listed by EPCRA Section 313.

\*\*This is a typical percentage of naturally occurring free crystalline silica.

### SECTION 3: HEALTH HAZARD DATA

Crystalline Silica	OSHA TWA:	Respirable	$\frac{10 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$
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### SECTION 3: HEALTH HAZARD DATA (continued)

Crystalline Silica	OSHA TWA:	Total Dust	$\frac{30 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$
Cristobalite	OSHA TWA:	1/2 the value from the mass formulae for quartz	
Alumina	OSHA TWA:	10 mg/m <sup>3</sup> as Dust	

#### ROUTES OF EXPOSURE:

Inhalation	Y	Dermal	N	Oral	Y
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**SKIN AND EYE CONTACT:** Contact with dust can cause irritation.

**INHALATION:** Health hazards can occur from excessive inhalation to silica dust. Smoking can increase the risk of injury.

**CHRONIC EFFECTS:** Exposure to crystalline silica may cause silicosis or pneumoconiosis. Respiratory infections due to silicosis can progress with continued exposure and advanced age.

**SIGNS AND SYMPTOMS OF EXPOSURE:** Symptoms of silicosis are usually delayed.

**CARCINOGEN LISTING:** This material and/or components of the material are listed by the IARC and the NTP as a carcinogen. This product is listed by the State of California as a carcinogen.

**SPECIAL PRECAUTIONS:** This product contains crystalline silica, a chemical known to the State of California to cause cancer.

### SECTION 4: FIRST AID MEASURES

#### SKIN AND EYE CONTACT:

**EYES:** Never rub eyes if exposed to dust. Flush immediately with liberal amounts of water for at least 15 minutes. Consult a physician if irritation persists.

**SKIN:** Wash with soap and water.

**INHALATION:** Remove victim to fresh air. Consult a physician if irritation persists.

**ORAL INGESTION:** Consult a physician immediately.

### SECTION 5: FIRE FIGHTING MEASURES

Flash Point: N/AP

Test Method:

N/AP

Lower Flammable Limit:

N/AP

Upper Flammable Limit:

N/AP

**Recommended Extinguishing Media:** Any type or style extinguisher.

**Unusual Fire and Exposure Hazards:** This mineral is non-combustible. Extinguishing apparatus in the surrounding area is useable and sufficient.  
Non-flammable

**Special Fire Fighting Procedures:** No special procedures required.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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It is recommended that a NIOSH approved N95 particulate respirator be worn at all times when visible dust is present either during product installation, removal or accidental releases.

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## SECTION 7: HANDLING AND STORAGE

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Use with adequate general and local ventilation. Notify safety personnel of major breakage, spill, wastes, etc.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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**Ventilation Requirements:** Use adequate general and local systems for ventilation.

### Personal Protective Equipment

**Eye Protection:** It is recommended that workers wear safety glasses/goggles when handling the raw material.

**Skin Protection:** It is recommended that workers wear appropriate clothing and gloves when handling the raw material.

**Respiratory Protection:** A NIOSH approved N95 particulate respirator should be worn at all times.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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**Physical State:** Solid Mineral

**Odor:** None

**Appearance:** Vitreous to pearly. Greyish color

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

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**pH:** N/AP

**Boiling Point:** N/AP

**Melting Point :** P.C.E. 36-37

**Solubility in Water:** Insoluble

**Specific Gravity:** 2.9-3.2

Evaporation Rate: N/AP

Vapor Density: N/AP

Vapor Pressure: N/AP

\*additional analysis is currently being performed.

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### SECTION 10: STABILITY AND REACTIVITY

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**Normally Stable:** Highly stable under ordinary conditions and in itself non-toxic

**Incompatible Materials:** None

**Hazardous Decomposition Products:** In high temperature, quartz can change crystal structure to form cristobalite (>1470°C) and has greater health hazards than quartz.

**Hazardous Polymerization:** There are no repeating structural units of the original molecules. Hazardous polymerization will not occur.

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### SECTION 11: TOXICOLOGICAL INFORMATION

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Test Type	Result Type	Animal Species	Hazard Rank
N/D	N/D	N/D	N/D

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### SECTION 12: ECOLOGICAL INFORMATION

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N/D

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### SECTION 13: DISPOSAL CONSIDERATIONS

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**Waste Disposal:** Dispose product in accordance with applicable federal, state and local regulations. Use waste containers suitable for transportation and disposal in accordance with federal, state and local regulations.

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#### SECTION 14: TRANSPORTATION INFORMATION

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DOT Hazard Class: N/AP

DOT Hazardous Materials: N/AP

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#### SECTION 15: REGULATORY INFORMATION

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In event of spill, containerize material in accordance with all Federal, State and Local regulations.

Follow all Federal, State and Local regulations for waste disposal.

Follow all applicable SARA Title III reporting guidelines for this product.

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#### SECTION 16: OTHER INFORMATION

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N/D = Not Determined

N/AP = Not Applicable

The information and recommendations contained herein are based upon data believed to be correct. However, no guaranty or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

This information is offered solely for your consideration and interpretation.