



www.kaiserlee.com

Kaiser Lee, LLC

## MATERIAL SAFETY DATA SHEET

<b>EMERGENCY PHONE:</b>	<b>(239) 540-1137</b>	<b>NFPA FIRE HAZARD</b>			
<b>INFORMATION PHONE:</b>	<b>(239) 540-1137</b>				
<b>Date:</b> October 19, 2007 <b>Supersedes:</b> January 21, 2007	<b>KV PRODUCTS</b>	F Flammability	F	0	4 Extreme
		H Health (*)	H	1	3 High
		R Reactivity	R	0	2 Moderate
		S Special Hazards	S	0	1 Slight
		(*) See text			0 Insignificant

### SECTION 1 - MATERIAL IDENTIFICATION

**MATERIAL NAME:** Kaiser Lee Board – Fiber Board  
**COMMON NAME:** Refractory Fiber, Ceramic Fiber  
**TRADE NAMES:** KLB, Kaiser Lee Board  
**PRODUCT FORMS:** Boards, Shapes  
**DISTRIBUTOR:** Kaiser Lee, LLC  
3732 SE 21<sup>st</sup> Place, Cape Coral, FL

### SECTION 2 - PRODUCT INGREDIENTS

Ingredient Name	CAS Number	%	Exposure Limits Reference
Alumina	1344-28-1	43-98	0.5 fibers/cc TWA 10 fibers/cc CL <sup>1</sup>
Silica <sup>2</sup>		2-56	10 mg/m <sup>3</sup> (total) TLV (ACGIH 1988-89) 6 mg/m <sup>3</sup> PEL (OSHA)
Organic and Inorganic Binder <sup>2</sup>			

No OSHA or ACGIH exposure limits have been established for these materials. Pending the results of long-term health effects studies, airborne exposures should be controlled at or below the exposure guidelines listed above.

Identity, CAS Numbers &/or percent composition are a trade secret.

### SECTION 3 - PHYSICAL DATA

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Appearance:	N/A	Vapor Pressure:	N/A
Boiling Point:	N/A	Vapor Density (air =1):	N/A
Melting Point:	N/A	Specific Gravity Range:	N/D
Water Solubility (%):	N/A	% Volatile by Volume:	N/A
Evaporation Rate:	N/A	pH:	N/A

## SECTION 4 - FIRE AND EXPLOSTION DATA

Flash point: None  
Auto-ignition Temperature: None  
Explosion Hazards: None  
Flammability Limits in Air: Lower - None    Upper - None

## SECTION 5 - HEALTH HAZARDS

### Signs and Symptoms of Exposure

Eyes contact: Slightly to moderately irritating. Abrasive action may cause damage to the outer surface of the eye.

Skin contact: Slightly to moderately irritating. May cause irritation and inflammation due to mechanical reaction to sharp, broken ends of fibers.

Ingestion: May cause disturbances to the gastrointestinal tract. Symptoms may include irritation, nausea, vomiting, and diarrhea.

Inhalation: May cause respiratory tract irritation. Repeated or prolonged breathing of particles of respirable size may cause inflammation of the lung leading to chest pain, difficult breathing, coughing and possible fibrotic change in the lung-- "Pneumoconiosis." Pre-existing medical conditions may be aggravated by exposure; specifically, bronchial hyper-reactivity and chronic bronchial or lung disease.

### Emergency and First Aid Procedures

Eye contact: Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Do not rub eyes.

Skin contact: Wash area of contact thoroughly with soap and water. Do not rub or scratch exposed skin. Using a skin cream or lotion after washing may be helpful.

Ingestion: Do not induce vomiting.

Inhalation: Remove affected person from source of exposure.

**CONSULT A PHYSICIAN IF ANY SYMPTOMS PERSIST**

## SECTION 6 - REACTIVITY DATA

Chemical Incompatibilities: None known

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Hazardous Decomposition Products:

None

Hazardous Polymerization: Will not occur

## SECTION 7 - SPILL OR LEAK/HANDLING PROCEDURES

**Handling:** Collect in a convenient manner, which will avoid dusting conditions. Wear respiratory protection during cleanup. Sweep up and recover or mix material with moist absorbent and shovel into waste container. Follow federal, state and local regulations for disposal.

Use adequate ventilation or other precautions to eliminate vapors resulting from binder burn off. Exposure to burn off fumes may cause respiratory tract irritation, bronchial hyper-reactivity and asthmatic response.

Product which has been in service at elevated temperatures (greater than 1800° F) may undergo partial conversion to cristobalite, a form of crystalline silica, which can cause severe respiratory disease--"Pneumoconiosis". The amount of cristobalite present will depend on the temperature and length in service.

IARC has recently reviewed the animal, human and other relevant experimental data on silica in order to critically evaluate and classify the cancer causing potential. Based on its review, IARC classified crystalline silica as a group 2A carcinogen. By definition a group 2A carcinogen is probably carcinogenic to humans. For crystalline silica, IARC's 2A classification was based on limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

The National Toxicology Program (NTP) listed ceramic fibers (respirable size) as being reasonably anticipated to be human carcinogens in the Seventh Annual Report on Carcinogens (1994). The listing has been repeated for the Eight Annual Report (1998), the Ninth Annual Report (2000) and the Tenth Annual Report (2002).

The OSHA permissible exposure limit (PEL) for cristobalite is 0.05 mg/m<sup>3</sup> (resp.). The ACGIH threshold limit value (TLV) for cristobalite is 0.05 mg/m<sup>3</sup> (resp.) (ACIGH 1988-89). Particular care should be taken when working with "used" material to minimize generation of dust. When removing and handling ceramic fiber used in high temperature applications special caution should be taken to avoid unnecessary cutting and tearing of the used material to minimize generation of airborne dust. Use NIOSH or MSHA approved equipment when airborne exposure limits may be exceeded, especially in confined areas with inadequate ventilation or other areas. Acceptable respirators recommended for given airborne cristobalite concentrations are:

Concentration	Respirator Type
Up to 10 times the PEL	Half-face cartridge respirator with high-efficiency filter.
10 to 100 times the PEL	Full-face cartridge respirator with high-efficiency filters.
> 100 times the PEL	Full-face, positive-pressure supplied air respirator.

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineered Controls:** Use local exhaust ventilation, hood or equipment enclosure to avoid dispersal of fibrous particulate

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into workplace air. Use an approved dust respirator or an approved air-supplied or self-contained respirator for non-routine or emergency conditions.

Use dust suppressant where sweeping is necessary. Avoid clean up procedures that may result in water pollution. Personal safety and exposure recommendations described elsewhere in this data sheet apply to exposure during clean up of spilled material

**Eye Protection:** Wear safety glasses or chemical goggles to prevent eye contact. Do not wear contact lenses when working with this substance. Have eye-washing facilities readily available where eye contact can occur.

**Protective Clothing:** Wear gloves, hats or full body clothing to prevent skin contact as necessary. Avoid taking unwashed work clothes home or provide disposable work clothing. Wash work clothes separately from other clothing. If clothing is to be laundered by someone else, inform launderer of proper procedures

**Respiration:** Use NIOSH or MSHA approved equipment when airborne exposure limits are exceeded. Acceptable respirators recommended for given airborne ceramic fiber concentrations are:

<u>Concentration</u>	<u>Respirator</u>
Up to 20 f/cc	Half-face air purifying respirator such as a respirator with appropriate cartridges or a disposable dust respirator (3M 8710 or equivalent).
> 20 f/cc to 200 f/cc	Full-face respirator with high-efficiency filters.
> 200 f/cc	Full-face, positive-pressure supplied air respirator.

## SECTION 9 - TOXICOLOGICAL INFORMATION

Currently, there are no known chronic health effects in humans from long-term exposure to ceramic fibers.

Animal studies have indicated that refractory ceramic fibers ingested into the peritoneal cavity (abdominal) have caused acute abdominal hemorrhaging in hamsters but not rats. Injections of this type have also caused tumors in the abdominal or pleural cavities in lifetime rat and hamster studies.

Recently published inhalation studies have provided contradictory results. One study, which used rats as the experimental animal, reported lung damage consisting of alveolar proteinosis and interstitial fibrosis, whereas, other studies using rats and hamsters, showed no similar effects.

Similarly, the pulmonary tumor-causing potential of refractory ceramic fibers in animals is unclear. Two inhalation studies suggest a low-order potential in inducing pulmonary tumors in animals, while other inhalation and intratracheal injection studies conclude that ceramic fibers are not tumorigenic in animals.

The International Agency of Research on Cancer (IARC) has recently reviewed the animal, human and other relevant experimental data on man made mineral fibers in order to critically evaluate and classify the cancer causing potential of these materials. Based on its review, IARC classified fibrous glass wool, mineral wool (both rock wool and slag wool) and ceramic fiber as group 2B carcinogens. By definition, a group 2B agent is possibly carcinogenic to

humans. For refractory ceramic fiber, IARC's 2B classification was based on sufficient evidence of carcinogenicity in experimental animals in the absence of human epidemiologic data.

The National Toxicology Program (NTP) listed ceramic fibers (respirable size) as being reasonably anticipated to be human carcinogens in the Seventh Annual Report on Carcinogens (1994). The listing has been repeated for the Eight Annual Report (1998), the Ninth Annual Report (2000) and the Tenth Annual Report (2002).

This product contains amorphous silica. IARC has determined that there is inadequate evidence for the carcinogenicity of amorphous silica to experimental animals and humans.

Further animal and human health studies are planned. Pending the results of these studies, strict adherence to recommended safe work practices described elsewhere in this data sheet is advised.

## SECTION 10 - DISPOSAL INFORMATION

**Waste Management/Disposal:** This substance, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however it could be hazardous if it is considered toxic, corrosive, ignitable, or reactive according to Federal definitions (40 CFR 261). Additionally, it could be designated as hazardous according to state regulations. This substance could be also become a hazardous waste if it is mixed with or comes in contact with a hazardous waste. If such contact or mixing may have occurred, check 40 CFR 261 to determine whether it is a hazardous waste. If it is a hazardous waste, regulations at 40 CFR 262, 263, and 264 apply. The transportation, storage, treatment, and disposal of this waste material must be conducted in compliance with all applicable Federal, State and local regulations.

## SECTION 11 - REGULATORY INFORMATION

**SARA Title III:** Listed below are the hazard categories for the Superfund Amendments and Reauthorization Act (SARA) Section 311/312 (40 CFR 370):

**SARA Title III Hazard Categories:**

Acute Health:	no	Pressure Hazard:	no
Chronic Health:	yes	Reactivity Hazard:	no
Fire Hazard:	no		

**Additional Environmental Regulatory Information:** There may be specific regulations at the local, regional or state level that pertain to this material.

The information herein is given in good faith but no warranty expressed or implied is made.

## SECTION 12 - DEFINITIONS

**ACGIH:** American Conference of Governmental Industrial Hygienists

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CAS: CAS stands for Chemical Abstracts Service  
EPA: Environmental Protection Agency  
HEPA: High Efficiency Particulate Air  
HMIS: Hazardous Materials Identification System  
MSHA: Mine Safety and Health Administration  
NFPA: National Fire Protection Association  
NIOSH: National Institute for Occupational Safety and Health  
OSHA: Occupational Safety and Health Administration  
RCRA: Resource Conservation and Recovery Act  
SARA: Superfund Amendments and Reauthorization Act  
TITLE III: Emergency Planning and Community Right to Know Act  
Section 302: Extremely Hazardous Substances  
Section 304: Emergency Release  
Section 311: MSDS/List of Chemicals  
Section 312: Emergency and Hazardous Inventory  
Section 313: Toxic Chemicals Release Reporting  
STEL: Short-Term Exposure Limit  
TCLP: Toxicity Characteristics Leaching Procedures (EPA)  
TLV: Threshold Limit Values (ACGIH)  
TSCA: Toxic Substance Control Act  
29 CFR 1910.134 & 29 CFR 1926.103: OSHA Respiratory Protection Standard  
29 CFR 1910.1200 & 29 CFR 1926.59: OSHA Hazard Communications Standard

## SECTION 13 - DISCLAIMER OF LIABILITY

THE INFORMATION CONTAINED HERE IN IS BASED ON DATA TAKEN FROM SOURCES BELIEVED TO BE BOTH CURRENT AND RELIABLE AT THE TIME OF PUBLICATION. KAISER-LEE, LLC. MAKES NO WARRANTIES EXPRESSED OR IMPLIED, AS TO THE ACCURACY AND ASSUMES NO LIABILITY ARISING FROM ITS USE BY OTHERS. COMPLIANCE

WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS REMAINS THE RESPONSIBILITY OF THE USERS.

## PRODUCT SAFETY INFORMATION CERAMIC AND ALUMINA FIBER PRODUCT

### Warning:

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This product contains a substance, which has been identified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans.

**Avoid breathing fiber particulates and dust**

**Risks:**

- ↓ Possible cancer hazard by inhalation
- ↓ May cause temporary irritation to eyes, skin, and respiratory tract.

**Precautionary Measures:**

- ↓ Minimize airborne fibers with engineering controls
- ↓ Wear a NIOSH/MSHA approved respirator
- ↓ Wear long sleeved, loose fitting clothing, eye protection, and gloves
- ↓ Wash work clothing separately and rinse washing machine after use.

**First Aid Measures:**

- Eyes: Flush with water  
Skin: Wash with soap and warm water  
Ingestion: Do not induce vomiting. Get medical attention if gastrointestinal symptoms develop  
Inhalation: Remove to fresh clean air

***If any of the above irritations persist, seek medical attention immediately***

*For additional product information and work practices refer to the MSDS*



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