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MATERIAL SAFETY DATA SHEET - K-LITE BULK FIBER, K-LITE BLANKET, K-LITE ANCHORED BLOCK, MONSTER MODULES

GLT Products

Date Prepared:

1/15/03

7200 Northfield Road

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Section 1 - Product Identification

Trade Names:

K-Lite Bulk Fiber

K-Lite Blanket

K-Lite Anchored Block

Monster Modules

Common Names:

RCF: Ceramic Fiber: Man-made Vitreous Fiber

(MMVF)

Material Name:

Refractory Ceramic Fiber Product

Intended Use:

High temperature industrial thermal insulation

Section 2 - Composition / Information on Ingredients

Ingredient CAS Number

Percent

OSHA/PEL

Manufacturer Recommended

Refractoris fibers, aluminosilicate 95-100

16 mg/m (total dust);

1 f/cc*

142844-00-6

5 mg/m (respirable dust)

Notes: * Recommended exposure guideline (REG) for respirable fibers as an 8 hour time weighted average (TWA) exposure based on air samples collected and analyzed using NIOSH method 7400(B).

(See Section 8 for Personal Protection Guidelines).

Section 3 – Hazards Identification

Possible Health Effects:

Dust and respirable fibers from this product may aggravate

existing chronic lung conditions such as bronchitis,

emphysema and asthma.

Target Organs:

Eyes, skin and respiratory system.

Primary Entry Route:

Inhalation

Acute Effects:

Upper respiratory physical irritation, irritation and

inflammation to the eyes on contact and to the skin on

prolonged contact.

Chronic Effects:

The Internal Agency for Research on Cancer (IARC), part of the World Heath Organization (WHO), has classified

RCF, along with fibrous glasswool and mineral wool as possible human carcinogens (Group2B) based on sufficient

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evidence of cardinogenicity in animals but insufficient data in huans. IARC has also classified respirable crystalline silica which may be found in after-service RCF exposed to temperatures above 1800°F, as a known carcinogen to humans (Group I. (See section 16 for additional information).

Signs and Symptons of Overexposure:

Section 4 - Fire and Explosion Hazard Data

Flash Point (F): N/A

Method Used: N/A

Auto Ignition Temperature (F): N/A

Flammability Limits (%): LEL: N/A UEL: N/A

Extinguishing Media:

Water, foam, dry chemical

Special Fire Fighting Procedures:

In a sustained fire, self-contained breathing apparatus

should be worn.

Unusual Fire & Explosion Hazards:

The facing on Kraft paper and foil-faced products will burn and should not be left exposed. Special care should be taken when working close to the facing with an open flame. Vinyl faced products in fire conditions may give off hydrogen chloride, a highly irritating and toxic gas.

Evacuate the building immediately.

Section 5 - Health Hazard Data

Primary Routes of Entry:

Inhalation and skin contact,

Inhalation:

Inhalation of dusts and fibers may result in irritation of the upper respiratory tract (mouth, nose and throat).

Skin Contact:

Skin contact with dusts and fibers may produce itching

and temporary mechanical irritation.

Eye Contact:

Eye contact with dusts and fibers may produce temporary

mechanical irritation.

Ingestion:

Temporary mechanical irritation of the digestive tract. Observe individual. If symptoms develop, consult a

physician.

Carcinogenicity:

Hazardous Ingredients:

Fiberglass Wool

Listed By: ACGIH

IARC

NTP

No

OSHA

No Yes No

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IARC: The International Agency for Research on Cancer (IARC) in June 1987, classified fiberglass wool as a possible cancer causing agent to humans (Group 2B). This classification was based on a combined evaluation of published human and animal studies. The human date included large-scale mortality studies of US and European fiberglass wool factory workers. IARC concluded that the human studies did not provide sufficient evidence that fiberglass wool caused cancer in humans. The classifications of fiberglass wool as a possible carcinogen to humans was substantially based on experimental animal studies in which they were exposed to wool glass fibers through non-natural routes, such as injection or implantation. IARC regards it as prudent to treat a material for, which there is sufficient evidence of Carcinogenicity to animals as if it is a possible carcinogen in humans.

ADDITIONAL INFORMATION: Animal inhalation experiments in which laboratory animals were exposed to large quantities of glass fiber have not resulted in a positive association between glass fibers and lung cancer. A small study of Canadian glass wool workers reported a statistically significant increase in lung cancer mornality.

Large-scale studies published in 1987, which examined the mortality rates of US and European fiberglass wool factory workers found no statistically significant differences in lung cancer rates between those workers and the population in their local or regional communities. A 1990 update of the US cohort reported small statistically significant excess for respiratory cancer in workers when compared with population in their local communities. While the overall morality rates in these morality studies were slightly raised and did increase with time since the first exposure, the increases were not related to duration of exposure or to an estimated time weighted measure of exposure. An expanded study is investigating other possible factors. CALIFORNIA PROP 65 STATEMENT: Warning: Contains fiberglass wool, possible cancer hazard. To avoid this possible cancer hazard, minimize breathing fiberglass wool dust.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Persons with a history of chronic respiratory or skin conditions that are aggravated by mechanical irritants may be at increased risk for worsening their condition from exposure to this product.

Section 6 - Employee Protection

VENTILATION: General dilution ventilation and/or local exhaust ventilation should be provided, as necessary, to maintain exposures below PEL's or TLV's. Dust collection systems should be utilized in operations involving high-speed cutting/machining, such as routing and may be required in other operations involving power tools.

RESPIRATORY PROTECTION: Appropriate respiratory protection should be used in accordance with your company's respiratory protection program and OSHA regulations under 29 DFR 1910.134. Use respiratory protection during installation or fabrication. A properly fitted NIOSH or MSHA approved air purifying respirator such as the 3M model 8710 or model 9900 (in high humidity environments) or equivalent should be used when working with fiberglass wool products under the following conditions:

- In any confined or poorly ventilated space;
- 2. Fabrication involving power tools;
- Any installation operation or fabrication which created a dusty working environment.

When the temperature of the surface being insulated exceeds 200°F, the binder in these products will undergo some degree of decomposition. The need for respiratory protection will vary according to the

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airborne concentration of the decomposition products released and accumulated in the area. In areas with good general and/or local exhaust ventilation when exposures are controlled below the PEL's or TLV's, respiratory protection is normally not needed. In confined areas, or areas with poor ventilation, respiratory protection may be needed. Airborne concentrations would be assessed to determine the appropriate type of respiratory protection to be used. When in doubt, use supplied air respiratory protection.

EYE PROTECTION: Safety glasses, goggles or face shields should be worn whenever fiberglass materials are handled.

PROTECTIVE CLOTHING: Wear loose fitting, long sleeved shirt that covers to the base of the neck, and long pants. Skin irritation from exposure to fiberglass is known to occur chiefly at pressure points such as around the neck, wrist and waist. Wear gloves when handling product.

WORK/HYGENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practices:

- 1. Avoid unnecessary exposures to dust and fibers.
- 2. Remove fibers from the skin after exposure.
- 3. Be careful not to rub or scratch irritated areas. Rubbing or scratching may force the fibers into the skin. The fibers should be washed off. Use of barrier creams can, in some instances, is helpful.
- 4. Use vacuum equipment to remove fibers and dust from clothing. Compressed air should never be used. Always wash work clothes separately and wipe out the washer/sink in order to prevent loose glass fibers from getting on other clothes.
- 5. Keep the work areas clean of dusts and fibers generated during fabrication. Use vacuum equipment to clean up dusts and fibers. Avoid sweeping or using compressed air as those techniques resuspend dusts and fibers into the air.
- 6. Have access to safety and eye wash fountains.

Section 7 - Reactivity Data

Stability (Conditions to avoid):

Stable (none)

Incompatibility (Materials to avoid):

None

Hazardous Decomposition Products: Facing and binder burns or decomposes in a fire. Primary combustion products are carbon monoxide, carbon dioxide and water. Vinyl faced products will release hydrogen chloride in a fire. Emission of hydrogen chloride begins at 525°F with faster emission as the temperature rises.

In addition, the binder in these products is expected to undergo some degree of decomposition due to end use temperatures in excess of 200°F. The products of combustion would include carbon monoxide, carbon dioxide, ammonia and water, and to a lesser degree various compounds that could be generated from nitrogen containing binder components.

Hazardous Polymerization

Will not occur.

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Section 8 - Storage Precautions

PRECAUTIONS TO BE TAKEN IN STORAGE AND HANDLING. Insulation should be stored in a dry place. Faced material should be well away from sources of ignition.

Section 9 - Physical Data

Melting Point (F): N/A

Boiling Point (F): N/A

Specific Gravity (H0=1): Not determined

Percent Volatile by Volume: N/A

Vapor Pressure: N/A

Vapor Density: N/A

Evaporation Rate: N/A

Solubility in Water:

Appearance and Odor:

Pink, yellow or tan insulation which may have faint resin

odor. Some products have a vinyl, kraft paper, foil or

polypropylene facing.

Section 10 - Environmental Protection

ACTION TO TAKE FOR SPILLS: N/A

WASTE DISPOSAL METHOD: Dispose in accordance with federal, state and local regulation. The primary method of disposal is in a municipal or industrial landfill.

EPA HAZARDIOUS WASTE NUMBER: This material is not regulated under the RCRA hazardous waste regulations.

Section 11 - Shipping Information

DOT SHIPPING DESCRIPTION: N/A

HAZARD CLASSIFICATION: Non-Hazardous

ID NUMBER: None IMO CLASS NUMBER: N/A STOC NUMBER: N/A

LABELS REQUIRE: N/A

EPA HAZARDOUS SUBSTANCE: N/A RQ VALUE: N/A

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PACKING REQUIREMENTS: N/A

MAXIMUM NET QUANTITY IN ONE PACKAGE: N/A

IATA PACKING GROUP: N/A

FREIGHT DESCRIPTION: N/A

Section 12 - Additional Information

CATEGORIES:

SARA III LISTINGS:

Acute Health: Yes

SEC.302: None

Chronic Health: Yes

Fire Hazard: Yes

CERCLA Hazardous Substance: None

Pressure Hazard: No Reactivity Hazard: No

SEC 313, Toxic Chemicals: None

NPCA-NMIS RATING:

NFPA RATING:

Health: 1

Health: 2

Flammability: 0

Flammability: 2

Reactivity: 0

Reactivity: 0

Personal Protection: Must be supplied by user

Unusual Hazards: None

Section 13 - Disclaimer

The information presented in this MSDS represents the most accurate known presentation of this product. However, due to the many and diverse variables in its end use, it is the end users responsibility to determine the suitability of this information for the adoption of the safety precautions as may be necessary.

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