

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS PREPARED BY: Environmental Health Dept. - Grace Construction Products

W.R. Grace & Co. – Conn.

62 Whittemore Ave.

Cambridge, MA 02140

U.S.A.

Arabian Vermiculite Industries

P.O. 7137,

Dammam 31462

Saudi Arabia

Telephone Number for Emergency Response

In USA: (617) 876 1400

In Saudi Arabia: +966 (13) 847 1450

MSDS Number: Z-01432 000001

Cancels MSDS # NEW

Date: 01/07/2006

Trade Name

**(SEE SECTION 16 FOR ADDITIONAL
PRODUCT IDENTIFICATION)**

MONOKOTE® TYPE MK-6s

Chemical Names and Family

Lightweight Gypsum-Aggregate Plaster

Product Use

Fireproofing Product

Formula

Blend of Gypsum (Hydrous Magnesium, Aluminum Silicate)

Polystyrene & Natural Cellulose

CAS# (Chemical Abstract Service)

Mixture-NA

SECTION 2 - HAZARDOUS INGREDIENT AND MAJOR COMPONENT INFORMATION (SEE SECTION 11 FOR COMPLETE CHEMICAL NAMES)

EXPOSURE LIMITS

Ingredient	Max % By Wt.	OSHA	Exposure Limits	
			ACGIH	OTHER
Calcium Sulfate CAS# 07778-18-9	80.00	PEL: 15 mg/m ³ TWA as Total Dust 5 mg/m ³ TWA as Respirable Dust	TLV: 10 mg/m ³ TWA	None Established
Hydrous Aluminum Silicate CAS# 08031-18-3	0.00	None Established	None Established	None Established
Hydrous Magnesium Aluminum CAS# 12174-11-7	0.00	None Established	None Established	None Established
Limestone CAS# 01317-65-3	4.00	PEL: Total: 15 mg/m ³ Respirable: 5 mg/m ³	TLV: Total: 10 mg/m ³	None Established
Nuisance Particles CAS# N/A	0.00	PEL: Total: 15 mg/m ³ Respirable: 5 mg/m ³	TLV: Total: 10 mg/m ³ Respirable: 3 mg/m ³	None Established
Silica, Quartz CAS# 14808-60-7	0.00	PEL: 0.1 mg/m ³ TWA as Respirable Dust	TLV: 0.1 mg/m ³ TWA as Respirable Dust	NIOSH: 50 ug/m ³ 10-hr. TWA as Silica
Calcium Sulfate CAS# 07778-18-9	80.00	PEL: 15 mg/m ³ TWA as Total Dust 5 mg/m ³ TWA as Respirable Dust	TLV: 10 mg/m ³ TWA	None Established

SECTION 3 – HAZARDS IDENTIFICATION

Emergency Overview:

Warning Statements:

WARNING! IRRITANT

... Contains Calcium sulfate CAS# 7779-18-9 with less than 3% Quartz CAS# 14808-60-7, Limestone CAS# 1317-65-3, Hydrous magnesium aluminum silicate CAS# 12174-11-7 or Hydrous aluminum silicate CAS# 8031-18-3, Natural Cellulose CAS# 65996-61-4, and Polystyrene CAS# 9003-53-6

- ... May be irritating if inhaled resulting in coughing and sneezing.
- ... Long term overexposure to airborne dust may cause decreased lung function.
- ... May cause minor mechanical irritation to eyes. Direct contact with spray can damage eyes.
- ... Wet material falling on floors, stairs or other surfaces will cause these surfaces to become slippery.
- ... Read and understand all Health and Safety information on the product label and Material Safety Data Sheet before use.

NPCA-HMIS Hazard Index

- Health 1
- Flammability 0
- Reactivity 0
- Personal Protection B, E (See Section 8)

Potential Health Effects:

Routes of Exposure:

Inhalation Exposure to excessive airborne dust may cause coughing, sneezing and dyspnea (shortness of breath, labored breathing). Long-term inhalation of dust may increase the risk of contracting pneumoconiosis (“dusty lungs”) and may also decrease lung function.

Skin and Eye Eye contact with dust may cause minor mechanical irritation. Direct eye contact with MONOKOTE may cause physical injury. Prolonged or repeated skin contact may dry skin.

Ingestion Not expected to be harmful

Carcinogenicity Information

- OSHA : Not applicable
- IRAC : Not applicable
- NTP : Not applicable

SECTION 4 - FIRST AID MEASURES

- EYE** In case of eye contact, immediately flush with plenty of water. Do not rub eyes. If blinking or tearing persists, see a physician.
- INHALATION** If inhaled, get fresh air immediately. If symptoms of irritation persist, consult a physician.
- INGESTION** Adverse health effects are not expected if swallowed. Consult a physician if symptoms develop.
- SKIN** In case of skin contact, wash affected area with soap and water.

SECTION 5 – FIRE FIGHTING MEASURES

- Flash Point : Not Applicable Flammable Limits:
- Method Used : Not Applicable LEL N.A. UEL N.A.
- N.F.P.A. Rating : Not Applicable
- Extinguishing Media : Not Applicable
- Special Fire Fighting Procedures : None Known
- Unusual Fire and Explosion Hazards : None Known

SECTION 6 - ACCIDENTAL RELEASE MEASURES

U.S. RELEASES

If spilled, prevent material from entering water systems. Observing the listed Precautionary Measures below: Dry spills should be immediately swept up and placed in a suitable container to prevent further release of material

Liquid spills should be immediately contained (to minimize the extent of the spill) and absorbed with an inert, non-combustible material. Place material in a suitable container to prevent further release.

SECTION 7 - HANDLING AND STORAGE INFORMATION

Precautionary Measures

- ... Avoid creating and inhaling dust
- ... Equip mixers with dust covers
- ... Provide ventilation and respiratory protection
- ... Wear skin and eye protection to avoid contact with dust or spray
- ... Post "Slippery When Wet" signs where appropriate
- ... Use Anti-slip surfaces when working on platforms
- ... FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION/EXPOSURE LIMITS

Ventilation

- Local Exhaust : Exhaust fans may be necessary when mixing in enclosed areas.
- Mechanical : Exhaust fans may be necessary when mixing in enclosed areas.
- Special : Not applicable
- Other : Not applicable

Respiratory Protection:

Wear NIOSH-approved respiratory protection to prevent employee exposures from exceeding the limits specified in Section 2.

Skin Protection

Work gloves or hand creams are recommended to prevent irritation or drying of the skin.

Eye Protection

Proper eye protection is required. At a minimum, safety glasses with side shields should be worn where exposures to excessive dust or spray is likely.

Other Protective Clothing or Equipment

Normal work clothes

Work/Hygienic Practices:

Use bag opening and disposal procedures which minimize the release of dust. Equip mixers with dust covers.

Prior to welding or cutting, MONOKOTE must be removed from steel surfaces in those immediate areas where exposure to excessive heat, applied either directly or through conduction, from cutting or welding operations is possible.

Remove fireproofing materials in a manner so as to minimize the creation of dust. All trades must exercise work practices which avoid creating dust. This may be accomplished by:

- Wetting fireproofing using water, prior to its removal
- Removing small areas of fireproofing at one time
- Maintaining a clean worksite

SECTION 9 - PHYSICAL AND CHEMICALS PROPERTIES

<u>Boiling Point</u>	: Not Applicable	<u>Specific Gravity</u>	: Not Applicable
<u>Vapor Pressure (mm Hg)</u>	: Not Applicable	<u>% Volatiles</u>	: Not Applicable
<u>Vapor Density (AIR=1)</u>	: Not Applicable	<u>Evaporation Rate</u> (Butyl Acetate=1)	: Not Applicable
<u>Solubility in Water</u>	: Slight	<u>pH</u>	: Approx. Neutral Varies with water
<u>Solubility in Water</u>	: 12-16 PCF		
<u>Appearance and Odor</u>	: Coarse, free flowing off-white to grey powder		
<u>Odor Threshold</u>	: Not Determined		

SECTION 10 – STABILITY AND REACTIVITY

Stable under normal conditions (yes or no): YES

Conditions or Materials to avoid (which may react or cause instability):

Prior to welding or cutting, MONOKOTE must be removed from steel surfaces in those immediate areas where direct exposure to excessive heat, applied directly or through conduction, from cutting or welding operations is possible. (See Section 8 for suggested removal practices).

Hazardous Decomposition or By Products:

As a result of incomplete combustion, Monomers (C₈H₈) and various Polymers (C₈H₈) may be given off. Temperatures in excess of 4,000°F may generate sulfur dioxide (SO₂). Upon complete combustion, carbon monoxide and carbon dioxide are released.

Hazardous Polymerization:

Will Not Occur

Conditions to Avoid:

Not Applicable

SECTION 11 - TOXICOLOGICAL INFORMATION

INGREDIENT

(Chemical Name, CAS#, & Common Name)

TOXICITY DATA: LD₅₀ & LC₅₀

(See Section 2 for Exposure Limits)

Gypsum (Calcium Sulfate)

No Data Available

CAS# 7778-18-9

Quartz (Crystalline Silica)

No Data Available

CAS# 14808-60-7

Calcium Carbonate

No Data Available

CAS# 1317-65-3

SECTION 12 – ECOLOGICAL INFORMATION

None Available At This Time

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste of this product is not defined as hazardous according to the US EPA (40 CFR 261.3)

Consult all regulations (federal, state, provincial, local, etc.) or a qualified waste disposal firm when characterizing waste for disposal. Dispose waste in accordance with all applicable regulations.

SECTION 14 – TRANSPORT INFORMATION

Transportation Hazard Classification

United States DOT

Canadian Regulations

Proper Shipping

Not Applicable

TDG CLASS

Non-hazardous

Name

HAZARD CLASS

Non-hazardous

IDENTIFICATION

Not Applicable

LABEL(s) REQUIRED

Not Applicable

Surface Freight Classification

Wall Plaster

SECTION 15 – REGULATORY INFORMATION

(Not Meant To Be All Inclusive, Selected Regulations Represented)

SARA Title III Reporting Information

Tier I & II Hazard Categories:

Immediate (Acute) Health

Contains Extremely Hazardous-SARA III Section 302 Ingredient:

NO

Comments:

Contains Toxic Chemical Release-SARA III Section 313 Ingredient:

NO

Comments:

Other Government Reporting Requirements:

Chemical Inventory Certification:

For U.S. Products Only

All ingredients contained in this product are included on the US EPA Toxic Substances Control Act (TSCA) inventory or exempt from listing on the TSCA inventory.

For Canadian Products Only

All ingredients contained in this product comply with the requirements of the Canadian Environmental Protection Act (CEPA) and are listed on the Domestic Substance List (DSL) or on the Non-Domestic Substance List (NDSL).

Non -Hazardous Ingredient Disclosure:

Natural Cellulose filler CAS# 65996-61-4 and Polystyrene CAS# 9003-53-6

SECTION 16 – OTHER INFORMATION

The information contained in this Material Safety Data Sheet is applicable to the following products:

Monokote Type MK-6s

“THE DATA INCLUDED HEREIN ARE PRESENTED IN ACCORDANCE WITH VARIOUS ENVIRONMENT, HEALTH AND SAFETY REGULATIONS. IT IS THE RESPONSIBILITY OF A RECIPIENT OF THIS DATA TO REMAIN CURRENTLY INFORMED ON CHEMICAL HAZARD INFORMATION, TO DESIGN AND UPDATE ITS OWN PROGRAM AND TO COMPLY WITH ALL NATIONAL, FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS APPLICABLE TO SAFETY, OCCUPATIONAL HEALTH, RIGHT-TO-KNOW, AND ENVIRONMENTAL PROTECTION.”