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MATERIAL SAFETY DATA SHEET

HPM-0111-01377

MSDS PREPARED BY: Arabian Vermiculite Industries

P. O. Box 7137 Dammam 314 Saudi Arabia

<u>Telephone Number for Information and Emergency Response</u> In Saudi Arabia: (03) 847-1450

MSDS Number: HPM-0111

000KSA

Date: 20/11/2007

ECTION 1 - PRODUCT IDENTIFICATION

SECTION 1.		ATHICATION		l.
Trade Names and Synonyms:	MONOKOTE	HPM FIRE STO	P MORTAR	
PRODUCT IDENTIFICATION				
<u>Chemical Names and Family:</u> <u>Product Use:</u> Formula:				
CAS# (Chemical Abstract Service):MIXTURE - NA				
Transpo	ortation Hazard Cla	ssification		
PROPER SHIPPING : Not A NAME	Applicable	TDG CLASS: No	on-hazardous	
HAZARD CLASS : Non-I	hazardous pplicable			
Surface Freight Classification : Wall	Plaster			
NPCA-HMIS Hazard Index :	o Health o Flammability	0	1 *	

- o Reactivity
- o Personal Protection

0 B, E (See Section 8)



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SECTION	2 - HAZARDOUS	INGREDIENTS/II	DENTITY INFORMATION
INGREDIENT	0/	TOXICITY DATA	LD ₅₀ , LC ₅₀ etc.
(Chemical Name, CAS# & Common Name)	% By Wt.	(See Section	on 9 for Exposure Limits)
Portland Cement CAS# 65997-15-1	60% M	· · · · · · · · · · · · · · · · · · ·	
Vinyl Acetate Polymer CAS# 9003-20-7	40% Max	LD ₅₀ (Oral, Rat) >5	000 mg/kg
Chopped Continuous	~2%	No data available	Glass Filament
CAS-65997-17-3			
SECTIO	N 3 - PHYSICAL	, DATA/CHEMICA	L CHARACTERISTICS
Boiling Point	: Not applicable	Specific Gravity (H	20=1) Not applicable
Vapor Pressure (mm Hg)): Not applicable	<u>% Volatile</u> :	Not applicable
Vapor Density (AIR=1):	Not applicable	Evaporation Rate N (Butyl Ace	
Solubility in Water:	Slight	<u>pH</u>	11-13 for Portland Cement
Bulk Density (#/cu.ft)	52-56 pct		
Appearance and Odor:	Coarse, free flowi	ing gray powder, no c	odor
Odor Threshold:	Not applicable		
SE	ECTION 4 - FIRE	AND EXPLOSION	HAZARD DATA
<u>Flash Point</u> <u>Method Used</u>		: Not applicable <u>F</u> : Not applicable	<u>lammable Limits:</u> <u>LEL</u> N.A. <u>UEL</u> N.A.
N.F.P.A. Rating	: Not ap	oplicable	
Extinguishing Med		: Not applicable	
Special Fire Fighting Pro	ocedures : None		
Unusual Fire and Explos	ion Hazards:	None known	

Sales Offices:



Manufactured in Saudi Arabia by: ARABIAN VERMICULITE INDUSTRIES

> **JEDDAH** P.O. Box 408, Jeddah 21411, Saudi Arabia Tel.: (02) 653-1333 / (02) 651-5615, Fax: (02) 653-0588



SECTION 5 - REACTIVITY DATA

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 exposure to excessive heat applied directly or through conduction from cutting or welding operations is possible.

Hazardous Decomposition or Byproducts:

As a result of incomplete combustion. Monomers (C8H8) and various Polymers (C8H8) may be given off. Temperature in excess of 4000°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 6 - HEALTH HAZARD DATA & TOXICOLOGICAL PROPERTIES

Routes of Exposure:

Inhalation:

Exposure to excessive airborne dust may cause irritation to the respiratory system resulting in coughing and sneezing, shortness of breath and wheezing. Exposure may also aggravate chronic respiratory conditions such as asthma or bronchitis.

Skin and Eye:

May cause acute and/or chronic irritation of eyes and skin. Exposure to skin may produce "Cement Dermatitis" which is usually due to the alkaline and abrasive

properties of cement dust and which can involve whole surface areas of the body. Exposure to cement may cause an allergic sensitivity. Prolonged contact with

skin may cause burns, especially if skin or product is wet. This may occur without warning since little heat is sensed.

EYE contact may result in inflammation or burns.

Direct contact with the force of the sprayed product stream during application may cause physical injury.

Ingestion:

If swallowed, may cause irritation or burns to the lining of the mouth, esophagus and stomach.

Carcinogenicity According to NTP, IARC and OSHA: Not applicable



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SECTION 7 - EMERGENCY AND FIRST AID PROCEDURES		
EYE: In case of eye contact, immediately flush eyes with plenty of water for at		
least 15 minutes while holding eyelids apart. Contact a physician.		
SKIN: In case of skin contact, flush immediately with plenty of water and dry		
thoroughly. After each work shift workers using products containing		
Portland Cement should shower with soap and water. Work clothing	should	
be changed daily.		
INGESTION: If swallowed, give large volumes of water or milk to drink and induce		
vomiting. Get medical attention. Never give anything by mouth to an		
unconscious person.		

SECTION 8 - PREVENTIVE & CONTROL MEASURES

Warning Statement: WARNING! IRRITANT.

..... Contains Portland Cement CAS# 65997-15-1,Vinyl Acetate Polymer CAS# 9003-20-7, Cellulose CAS# 65996-61-4, Chopped Continuous Glass Filament CAS# 65997-17-3 and Quartz CAS# 14808-60-7

..... Inhalation of Portland Cement Dust may cause coughing and sneezing and may result in temporary breathing difficulties. Exposure may aggravate chronic respiratory conditions such as asthma or bronchitis. Repeated inhalation may

cause long term and/or delayed lung injury.

..... Cement is very irritating to eyes and skin, when wet or dry. Exposure may cause alkali burns resulting in damage to skin and eyes. Direct contact with the force of the sprayed product stream during application may cause physical injury.

..... Wet material falling on floors, stairs or other surfaces will cause these surfaces to become slippery.

Precautionary Measures:

- Avoid creating and inhaling dust.
- Equip mixers with dust covers.
- Provide ventilation and respiratory protection.
- Avoid contact with skin and eyes.
- Wear skin and eye protection to avoid contact with dust or spray.
- Post "Slippery When Wet" signs where appropriate.
- Use Anti-slip surfaces on working platforms.

Respiratory Protection:

Wear NIOSH-approved dust mask (Type TC-21C-XXX) to prevent exposure above the limits specified in Section

Sales Offices:

DAMMAM P.O. Box 7137, Dammam 31462, Saudi Arabia Tel.: (03) 847-1450, Fax: (03) 847-1575 Telex: 803144 KASFIN SJ E-Mail: <u>avi@avi-sa.com</u>



Manufactured in Saudi Arabia by: ARABIAN VERMICULITE INDUSTRIES

RIYADH P.O. Box 61531 Riyadh 11575 Saudi Arabia Tel. & Fax: (01) 478-4440



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

Skin Protection:

Work gloves, barrier creams and boots are recommended to prevent irritation of drying 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 to minimize dust released during mixing cycle. After each work shift, workers using products containing Portland cement should shower with soap and water. Work clothing should be changed daily.

All trades should minimize the release of dust during the removal of fire protection materials by:

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

SECTION 9 – HAZARDOUS INGREDIENTS EXPOSURE LIMITS

INGREDIENT:

PORTLAND CEMENT	$10 \text{ mg/m}^3 - \text{TWA10 mg/m}^3 - \text{TWA10mg/m}^3 - \text{TWA}$			
CAS# 65997-15-1	as Total Dust			otal Dust
	$5 \text{ mg/m}^3 - \text{TWA}$	5 mg/m^3	-TV	VA
	As Respirable Dust		as	Respirable
Dust				
RESPIRABLE DUST* CAS# NA	5 mg/m ³ – TWA – –			
TOTAL DUST* CAS# NA	$15 \text{ mg/m}^3 - \text{TWATLV/TWA: } 10 \text{ mg/m}^3$ None established by the set of the set	lished		

SECTION 9 - HAZARDOUS INGREDIENTS EXPOSURE LIMITS

Observe precautions noted above. Sweep or shovel spilled material and place in suitable containers for recycle or disposal.

Waste of this product is not defined as hazardous according to the US EPA (40 CFR 261.3) Dispose of waste in accordance with all applicable regulations.



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VENTILATION	: General (i.e. natural or mechanically induced fresh air movements that maintain dust concentrations below recommended exposure limits).
EYE PROTECTION	: Safety glasses or goggles are recommended.
SKIN PROTECTION	: Work gloves and/or barrier creams are recommended to prevent irritation or Drying of skin.

AND PERSONAL PROTECTIVE FOLIDMI

RESPIRATORY PROTECTION:

Wear a NIOSH-approved dust mask when exposure to dust is encountered.

PRECAUTIONS FOR SAFE HANDLING AND USE

HANDLING AND STORING PRECAUTIONS:

Avoid generating dust. Store in a dry location preferably between 40 and 90°F. Follow label instructions for proper mixing.

SPILL PROCEDURES Sweep up and place in suitable containers for recycle or disposal.

WASTE DISPOSAL METHODS:

Consult with regulatory agencies or corporate personnel for disposal methods that comply with local, state, and federal health and environmental regulations.

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CORRECT, HOWEVER, TO GUARANTEE OR WARRANTY OF ANY KIND EXPRESSED OR IMPLIED IS MADE WITH RESPOECT TO THE INFORMATION PROVIDED.

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