

1. PRODUCT INFORMATION

CHEMICAL NAME: Exfoliated Vermiculite

CAS NUMBER: 1318-00-9

CHEMICAL FAMILY: Hydro-phlogopite

CHEMICAL FORMULA: $(\text{Mg Fe...Fe...})_3 [(\text{SiAl})_4\text{O}_{10}] [\text{OH}]_2 \cdot 4\text{H}_2\text{O}$

2. COMPOSITIONS AND INFORMATION ON INGREDIENTS

Name	% By Weight	CAS #	Toxicological Data
SiO ₂	41.20%	Not applicable	Not applicable
Al ₂ O ₃	12.68%	Not applicable	Not applicable
Fe ₂ O ₃	4.06%	Not applicable	Not applicable
FeO	1.54%	Not applicable	Not applicable
CaO	0.96%	Not applicable	Not applicable
MgO	24.22%	Not applicable	Not applicable
TiO ₂	1.33%	Not applicable	Not applicable
K ₂ O	5.97%	Not applicable	Not applicable
P ₂ O ₅	0.06%	Not applicable	Not applicable
H ₂ O	3.00%	Not applicable	Not applicable
Na ₂ O	1.60%	Not applicable	Not applicable
MnO	0.043%	Not applicable	Not applicable
TiFeO	5.71%	Not applicable	Not applicable
EVAPORATION	6.71%	Not applicable	Not applicable

NO ASBESTOS FIBERS WERE DETECTED IN SAMPLES BY POLARIZED LIGHT MICROSCOPY.

3. SUMMARY OF HAZARDS

Potential Acute Health Effects: No specific information is available in our database regarding the other effects of this material for humans.

Potential Chronic Health Effects:

There is no known effect from chronic exposure to this product. Repeated or prolonged exposure is not known to aggravate medical condition.

CARCINOGENIC EFFECTS:	Not available
MUTAGENIC EFFECTS:	Not available
TERATOGENIC EFFECTS:	Not available
TOXICITY OF THE PRODUCT TO THE REPRODUCTIVE SYSTEM:	Not available

4. CHEMICAL AND PHYSICAL PROPERTIES

MELTING POINT:	1320-1350 C	VAPOR PRESSURE:	Not applicable
% VOLATILE BY VOLUME:	Not applicable	VAPOR DENSITY:	Not applicable
SOL. IN WATER:	Insoluble	SPECIFIC GRAVITY:	0.7-1.1Kg/ml (H ₂ O=1)
PH (1% sol'n/water):	6~7	EVAPORATION RATE:	6.71%
APPEARANCE:	Golden Dark Yellow Flake	ODOR:	None
HEAT CONDUCTIVITY	0.045-0.06Kc/m	TENSILE STRENGTH	1000-1500Kg/cubic cm
INHERENT WATER	>5%	ANTIBIOTIC	Good

5. HEALTH EFFECTS**SKIN:**

Repeated contact may cause mechanical irritation and drying of skin.

EYES:

Eye contact may cause mechanical irritation and dust could damage eye surfaces.

INHALATION:

Repeated exposure to respirable dust above the TLV can result in reduced lung function, reduced work capacity and increased susceptibility to other lung diseases.

INGESTION:

None known or anticipated.

TARGET ORGAN:

Respiratory System.

6. FIRST AID PROCEDURES**EYE CONTACT:**

Do not rub eyes. Flush with water for 15 minutes. Seek medical attention.

SKIN CONTACT:

Wash effected areas with soap and water. If irritation persists, seek medical attention.

INHALATION:

If conditions should develop that require first aid, remove victim to fresh air. If necessary, begin artificial respiration or CPR by a trained person. Seek medical attention.

INGESTION:

There has been no known case of ore ingestion.

7. EXPOSURE CONTROL & PERSONAL PROTECTION**GLOVES:**

Rubber, leather or fabric to prevent mechanical irritation through friction. Be sure insides of gloves do not become contaminated with dust.

VENTILATION:

Local or general ventilation sufficient to maintain exposure below PEL.

EYES:

Wear protective glasses or goggles.

RESPIRATOR:

Approved air purifying or air supplied dust respirator. Refer to ANSI Z88.2 -1969 and 29 CFR 1910.134 if necessary to choose approved respirator.

8. FIRE AND EXPLOSION HAZARD DATA

LEL:	Not applicable
UEL:	Not applicable
FLAMMABLE LIMITS:	Not applicable
FLASH POINTS:	Not applicable
PRODUCTS OF COMBUSTION:	Not applicable
EXTINGUISHING MEDIA:	Dry chemical, carbon dioxide, water spray or foam.
SPECIAL FIRE-FIGHTING PROCEDURES:	Use procedures necessary to control the type of fires occurring in the area.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Negligible fire hazard when exposed to heat or flame.

9. STABILITY AND REACTIVITY DATA

STABILITY: This product is stable.

INCOMPATIBILITY: No compatibility known.

HAZARDOUS POLYMERIZATION:

Will not undergo hazardous polymerization.

HAZARDOUS DECOMPOSITION PRODUCTS OTHER THAN BY FIRE OR EXPLOSION:
None known.

10. SPILLS, LEAK, AND DISPOSAL INFORMATION**SPILL AND LEAK:**

Avoid inhalation of dust. Sweep up and transfer material to secure container.

DISPOSAL:

Dispose of in accordance with local and federal environmental protection laws.

11. SHIPPING INFORMATION

Not regulated for Transportation Purposes.

12. ADDITIONAL INFORMATION**CALIFORNIA PROPOSITION 65 WARNINGS:**

WARNING: This product contains a chemical known to the State of California to cause cancer. Chemical ingredient(s) requiring this warning: NONE

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Chemical ingredient(s) requiring this warning: NONE

Health Hazard	2
Fire Hazard	0
Reactivity	0
Personal Protection	E

HMIS (USA)

For additional non-emergency MSDS information, contact or write:

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