



WHITE KNIGHT MINERALS

MATERIAL SAFETY DATA SHEET

1. Identification of the Substance, Preparation and

Company Product Name : Vermiculite (All Grades)

Product Type : Exfoliated Vermiculite

Supplier : White Knight minerals
#26-3-1186, 9th Street, Jyothi
Nagar, Vedayapalem
Nellore, Andhra Pradesh – 524004, India

Emergency Telephone : +91-9866660002

Material Uses/Applications: Applications are varied but include friction brake linings, high temperature insulation, loft insulation, construction products, animal feeds, horticulture and many other industrial applications.

2. Composition / Information on Ingredients

Vermiculite is the mineralogical name given to hydrated laminar magnesium-aluminum-iron silicates which resemble mica in appearance. When subjected to heat, crude vermiculite has the unusual property of exfoliating or expanding.

3. Hazards Identification

Routes of exposure : Inhalation and Ingestion.

Health hazards : Vermiculite is of low acute toxicity, but prolonged exposure to any mineral dust could cause respiratory problems.

Symptoms of exposure (Acute effects): None known.

Symptoms of exposure (Chronic effects) : Possible impairment of lung function after long-term exposure to dust levels in excess of OES-TWA.

Medical conditions : Any conditions aggravated by dust (e.g. asthma or pneumoconiosis) may be aggravated by exposure

Known synergists : None known . **Explosion**

hazards : None. **Fire hazards :** None.

Corrosion hazards : None.

4. First Aid Measures

Skin contact: Wash thoroughly with soap and water after use.

Eye contact: Irrigate thoroughly with water. Obtain medical advice if any pain or redness persists.

Ingestion: There are no known adverse effects. If ingested in large quantities, wash mouth out with water and give water to drink. Do not induce vomiting.

Inhalation: If inhaled in large quantities and mechanical irritation or discomfort occurs, allow the patient to rest in a well-ventilated room.

Injection under pressure: Not applicable. **Antidote:** Not applicable.

Advice to physicians: No special requirements. In all cases should symptoms persist seek medical advise.

5. Fire Fighting Measures

Non-flammable, no special precautions necessary.

Extinguishing media : Not applicable.



Special exposure hazard : Not applicable. **Protective equipment** : Not applicable.

6. Accidental Release

Measures Leaks and Spills :

Vacuum spillages.

Personal precautions : No special requirements.

Environmental precautions : No special requirements.

7. Handling and Storage

Handling precaution: Avoid creating airborne dust wherever possible. Where dust is generated then engineering dust control measures, e.g. LEV, should be considered.

Storage precautions: No special precautions. **Shelf life**: Indefinite. **Specific uses**: N/A

8. Exposure Controls/Personal Protection

Exposure limit values: As per HSE Guidance Notes EH40. See section 2.

Exposure controls: Use appropriate engineering controls to maintain dust levels below OES-TWA limits.

Respiratory protection: Dust masks conforming to EN149 FFP2S or FFP3S should be used if OES-TWA limits are exceeded.

Personal protection: No special precautions.

Environmental exposure: Ensure compliance with statutory environmental legislation controls.

9. Physical and Chemical Properties

Appearance and odor: Flakes or powder, odor free.

Boiling point °C: Not applicable.

Melting Point °C: Approximately 1300°C.

Flash point °C: Not applicable.

Flammability: Nonflammable.

Oxidizing property: None.

Vapor pressure mPa: Not applicable.

Density at 20°C (Kg/m³): Variable depending on grade.

Solubility: Virtually insoluble.

Specific gravity: Approximately 2.8. (Water = 1)

Evaporation Rate: Not applicable. (Butyl acetate = 1)

Partition coefficient: Not applicable.

pH value of 10% aqueous slurry: Approximately 9.

Gross molecular formula: Variable. **Viscosity**: Not applicable.

Explosion limit : Not applicable.

10. Stability and Reactivity

Chemical stability: Material is stable under normal ambient conditions.

Conditions to avoid: None.

Materials to avoid: None.

Hazardous decomposition products: None known.

Hazardous polymerization: Not applicable.

11. Toxicological Information

Acute Toxicity: -

Oral LD50 (rat) (mg/kg)

Dermal LD50 (rat) (mg/kg)

Inhalation LC50 4hr(rat) (mg/l)

Not known but since vermiculite acts as an inert material in Acute Toxicity tests, LD50/LC50 values would be high.

Irritation to skin : Can cause mild irritation.

Irritation to eyes : Can cause mild irritation.

Respiratory sensitization

Skin sensitization

Repeated dose toxicity:

Mutagenicity :

Carcinogenicity :

Reproductive toxicity :

Not known but information available shows material to be non-toxic. Chronic long-term respirable problems are possible

The review of available experimental data suggests that over exposure to respirable crystalline silica (RCS) dust can cause silicosis, a form of progressive pulmonary fibrosis. Long-term exposure to high levels of RCS dust can also lead to an increased risk of developing lung cancer. However, the phase 2 review carried out by the HSE (EH75/5) concludes that although RCS is a cause of lung cancer in humans, it is not a potent carcinogen. As a result of these findings CHAN35 has been issued by the HSE suggesting that for RCS, employers should aim to control exposures to 0.1mg/m³ (8hr TWA) or below. The HSE is not proposing a formal change to the MEL because a new system of Occupational Exposure Limits (OELs) is planned to be in place by the end of 2004, which is likely to overtake any new MEL developments.

12. Ecological Information

Eco toxicity:

Mobility:

Persistence & degradability:

Bio accumulative potential:

Other adverse effects:

No information available, but since the material is naturally occurring, unreactive, insoluble and non-biodegradable, no Ecological problem is known or expected.

13. Disposal Information

Containment techniques: No special requirements.

Clean-up procedures: Vacuum preferred but simpler methods are acceptable.

Waste disposal: No special precautions necessary other than compliances with local regulations for non-hazardous materials.



14. Transport Information

United Nations Number:
ADR/RID Class:
Packing Group:
IMDG Code:
ICAO/IATA
IMO Shipping name IATA
Shipping name:
ADR Shipping name: RID
Shipping name:

Not applicable as material is classified as non-hazardous

15. Regulatory Information

(EC regulatory Information)
EC Supply labeling :
Label name :
Classification & Symbol:
Risk Phrases:
Safety Phrases:
FAO Hazard labeling:

Not applicable as material is classified as non-hazardous.

16. Other Information

Training: Training should be given to employees, in how to handle the material without generating dust or spillages.

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WHITE KNIGHT
NEVER BEHIND SHADOWS