



RR ENTERPRISES

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TECHNICAL DATA SHEET

Product Name

Crude/Exfoliated Vermiculite

Product Code(HSN): 25301010 & 68062000

CAS No. 1318-00-9

Supplier

RR Enterprises, Chennai, Tamil Nadu, India

1. Product Description

Grades Available: Raw/Crude/Grouped Vermiculite – 0.5mm – 8 mm

Grades Available: Exfoliated Vermiculite

- Agricultural Exfoliated Vermiculite (0.25mm- 4mm)
- Brake Lining Exfoliated Vermiculite (1 mm)
- Horticulture Exfoliated Vermiculite (4 mm)
- Construction Vermiculite (1 mm – 4 mm)

Vermiculite is the geological name given to a group of hydrated laminar minerals which are aluminium iron-magnesium silicates, resembling mica in appearance. Rock and other impurities are removed from the crude ore which is then crushed and sorted into sizes. Vermiculite is a safe inert material and is light in colour. When heated it expands (exfoliates) up to 14 times its original volume. The exfoliation process converts the dense flakes of ore volume. The exfoliation process converts the dense flakes of ore into lightweight porous granules containing innumerable minute air layers. Exfoliated (expanded) vermiculite is light and clean to handle, has a high insulation value, acoustic insulating properties and will absorb and hold a wide range of liquids. These granules are non-combustible and are in-soluble in water and all organic solvents. Expanded vermiculite is easily poured, is light, clean, highly absorbent and provides baffle against impact shock when used for packing.

Exfoliated vermiculite is used in the friction brake linings market, high temperature insulation, loft insulation, various construction products, animal feeds, horticulture and many other industrial applications. Vermiculite with its layered structure and surface characteristics, is utilized in products such as in tumescent coatings and gaskets, the treatment of toxic waste and air-freight packaging of hazardous goods.

2. Physical and Chemical Properties

Property	Raw/Crude/Grouped Vermiculite	Expanded/Exfoliated Vermiculite
Appearance	Black. Grey, Golden Brown granules	Golden Brown, Yellow solid, powdered crystal granules
Grade	0.5 mm – 8 mm (custom grades per specs)	0.5 mm – 12 mm (custom grades per specs)
Bulk Density (grams/litre)	800 gm/l – 1,050 gm/l	140 gm/l – 550 gm/l
pH	7.80	7.80
Moisture (%)	1.09	1.48
Loss on Ignition (%)	9.31	10.42
Chemical Properties		
Chemical Name (%)	Result	Result
Silicon Dioxide	45.1	56.6
Aluminium Oxide	12.8	15.1
Magnesium Oxide	12.0	14.5
Phosphorous Pentoxide	0.10	0.20
Potassium Oxide	2.60	5.66
Calcium Oxide	0.564	1.12
Titanium Oxide	0.855	1.52
Ferrous Oxide (Iron Oxide)	13.8	16.5

3. Features of Vermiculite

<ul style="list-style-type: none">• Light in weight• Non-corrosive• Free flowing• Non-conductor of electricity• Odourless• Acid-resistant• Chemically Inert• Non-abrasive• Reflective	<ul style="list-style-type: none">• Non-toxic• Highly Hygroscopic• Low thermal conductivity• Vermin, termite, moth and rodent proof• Insoluble in water & organic solvents• Resistance to heat penetration• High thermal insulation.• Asbestos Free
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4. Industrial Uses and Applications of Vermiculite

CONSTRUCTION <ul style="list-style-type: none">• Thermal insulation of roofs in buildings.• Acoustical insulation• Insulation of air conditioning ducts.• Masonry filling of hollow bricks.• Wall plaster aggregates• Decoration medium.	HORTICULTURE/AGRICULTURE/ANIMAL FEEDS <ul style="list-style-type: none">• Water retention medium• Seed coverings• Anti-caking agent• Floral arrangements• Water Purification• Soilless potting• Bulb storage• Fertilizer
BRAKE LINING <ul style="list-style-type: none">• Hardness• Friction - Wear• Thermal Stability	PAINTS <ul style="list-style-type: none">• High Temperature• Fire Resistance• Bonding Agent

5. Safety and Handling

<ol style="list-style-type: none">1. Not classified as hazardous under GHS/OSHA2. Avoid dust inhalation (use dust mask in poorly ventilated areas)	<ol style="list-style-type: none">3. Store in cool, dry, well-ventilated location4. Wear gloves/eye protection for bulk handling
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6. Regulatory Compliance

- Conforms to international technical and safety standards
- Free from asbestos (certified supply)
- Food/horticulture grade product available upon request

7. Packaging

Done in polythene lined gunny bags / New HDPE bags

Exfoliated Vermiculite Bag Weight: 10, 12, 15kg. each

Raw Vermiculite: 25 – 50 kg. each.

***Disclaimer:** Our technical consultants are always ready to answer your specific questions and advise you with the product application according to your needs. The information in this sheet is based on practical experience, as well as on tests and reflects our current state of knowledge. It is informative and does not whether our product is suitable for your purposes.*