



# Namekara Mining Company Ltd

## CRUDE NAMEKARA VERMICULITE SPECIFICATION SHEET

### DESCRIPTION

Vermiculite is the mineralogical name given to a group of naturally occurring hydrated laminar minerals which are magnesium-aluminium-iron silicates. When subjected to heat, vermiculite has the property of exfoliating or expanding, due to the generation of inter-laminar steam. The exfoliation process converts the dense flakes of ore into lightweight porous granules containing numerous minute air layers. The exfoliation characteristic is the basis for the commercial use of vermiculite.

### PARTICLE SIZE DISTRIBUTION

PARTICLE SIZE RANGE		GRADE A						
		PREMIUM	LARGE	MEDIUM	FINE	SUPERFINE	MICRON	RSU
Minimum percentage by weight retained in range indicated	11.2-5.6mm	80%						
	9.5 – 4.00mm		80%					
	4.75 – 2.0mm			80%				
	2.8 – 1.0mm				80%			
	1.7 – 0.3mm					80%		
	0.71-0.18mm						80%	
	0.50-0.18mm							60%

PARTICLE SIZE RANGE		GRADE B						
		PREMIUM	LARGE	MEDIUM	FINE	SUPERFINE	MICRON	RSU
Minimum percentage by weight retained in range indicated	11.2-5.6mm	N/A						
	9.5 – 4.00mm		N/A					
	4.75 – 2.0mm			<80, >70%				
	2.8 – 1.0mm				<80, >70%			
	1.7 – 0.3mm					N/A		
	0.71-0.18mm						N/A	
	0.50-0.18mm							N/A

**NONE EXFOLIATING (GRIT) CONTENT**

Maximum percentage by weight	GRADE A						
	PREMIUM	LARGE	MEDIUM	FINE	SUPERFINE	MICRON	RSU
	7%	7%	7%	7%	12%	15%	40%

Maximum percentage by weight	GRADE B						
	PREMIUM	LARGE	MEDIUM	FINE	SUPERFINE	MICRON	RSU
	N/A	N/A	>7, <10%	>7, <10%	N/A	N/A	N/A

**TYPICAL CHEMICAL ANALYSIS**

COMPONENT	COMPONENT TYPICAL WEIGHT (%)
SiO <sub>2</sub>	35 - 39
MgO	20 - 25
Fe <sub>2</sub> O <sub>3</sub>	9 - 11
Al <sub>2</sub> O <sub>3</sub>	10 - 13
TiO <sub>2</sub>	< 2
CaO	< 2
K <sub>2</sub> O	< 1
Na <sub>2</sub> O	< 1
P <sub>2</sub> O <sub>5</sub>	< 1
Mn <sub>3</sub> O <sub>4</sub>	< 1

**OTHER TYPICAL PROPERTIES**

	GRADE				
	PREMIUM	LARGE	MEDIUM	FINE	SUPERFINE
Loose bulk density (Crude – kg/m <sup>3</sup> )	500-800	450 - 700	450 - 700	400 -700	350 - 650
Loose bulk density (Exfoliated – kg/m <sup>3</sup> )	75-90	75 - 90	85 – 100	85 - 100	85 - 110
Surface Moisture	<6%	< 6%	< 6%	< 6%	< 6%
pH	6.5-7.5	6.5 – 7.5	6.5 – 7.5	6.5 – 7.5	6.5 – 7.5
Loss on Ignition	15% at 800 degrees celsius	15% at 800 degrees celsius	15% at 800 degrees celsius	15% at 800 degrees celsius	15% at 800 degrees celsius

**PACKAGING**

1.1 metric tonne Bulk Bag, 20 bags per 20" container (loose or break bulk)

**AS VERMICULITE IS A NATURAL PRODUCT, THIS SPECIFICATION MAY BE SUBJECT TO SLIGHT VARIATIONS. NAMEKARA VERMICULITE IS PERIODICALLY TESTED BY REPUTABLE INTERNATIONAL LABORATORIES FOR THE PRESENCE OF ASBESTIFORM MINERALS. NO ASBESTIFORM MINERALS HAVE BEEN DETECTED. CERTIFICATES OF ANALYSIS ARE AVAILABLE ON REQUEST.**