



**SUKUM IMPEX**

# PHYSICAL & CHEMICAL DATA

**SUKUMICA-SP-1W**



## Abstract

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## PHYSICAL & CHEMICAL DATA

### SUKUMICA SP-1-W

“SUKUMICA SP-1-W” is mica-based material. It has excellent thermal and chemical resistance making it suited to the high temperature conditions of the automotive and steel industry, exhaust systems, burners and ovens. It has good electrical insulation and low thermal conductivity properties.

#### APPROPRIATE INDUSTRIES & APPLICATIONS

CHEMICAL INDUSTRY

PETROCHEMICAL INDUSTRY

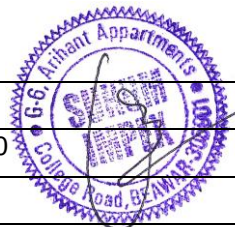
AUTOMOTIVE AND ENGINE BUILDING INDUSTRY

HEATING SYSTEMS

HIGH TEMP. APPLICATIONS

#### PHYSICAL PPROPERTIES

CHARATERISTICS	UNIT	<u>S-1-W</u>
Clolour		Sliver/Green
Density	gm/cm	2.9
	lb/ln3	0.0955-0.105
Specific Heat		0.21
Hardness	Moh Scale	2.1-3.0
	Shore test	70-100
Optic axial Angle		05-30
Tensile Strength	Kgf/cm2	About 1150
	Lbf/in	About 15000
Shear strength	Kgf/cm2	1100-2700





	Lbf/in <sup>2</sup>	14000-19000
Compression Strength	Kgf/cm <sup>2</sup>	-----
	Lbf/cm <sup>2</sup>	-----
Modulus of Elasticity	Kgf/cm <sup>2</sup> *10 <sup>-3</sup>	1400-2100
	Lbf/in <sup>2</sup> *100 <sup>-6</sup>	20-30
Coefficient of expansion per °C perpendicular to cleavage plane	.	30 *10 <sup>-6</sup> - 60 * 10 <sup>-6</sup>
Calcining Temperature	C	900-10000
	F	1650-1830
Maximum operating temperature	C	800-900
	F	1470-1650
Thermal conductivity		
Perpendicular to cleavage planes	Gm.cal/sec/cm <sup>2</sup> /C/cm	About 0.0001
	BTU/hr/ft <sup>2</sup> /Of/ft	about 0.24
Parallel to cleavage planes	Gm.cal/sec/cm <sup>2</sup> /C/cm	About 0.012
	BTU/hr/ft <sup>2</sup> /Of/ft	About 3.0
Water of constitution %		3.0
Moisture absorption		Very low
Apparent electric strength	0.001" to 0.003" KV/mm	-----
	thick Volts per 0.001"	-----
R.M.S. at 15° C (60°F)	0.01" to 0.05" KV/mm	30 - 60
	thick Volts per 0.001"	750 - 1500
Permittivity at 15°C(60oF)		5- 6
Power Factor (loss tangent)	@ 15° C (60° F)	0.0001 - 0.0005
Volume Resistivity	25° C (77° F) ohm cm	1 x 10 <sup>12</sup> -1 x 10 <sup>12</sup>
Acid reaction		Affected by Sulphuric Acid



**Chemical Properties**

Silica (SiO <sub>2</sub> )	45.88%
Alumina (Al <sub>2</sub> O <sub>3</sub> )	33.42%
Potassium Oxide (K <sub>2</sub> O)	9.98%
Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> )	3.26%
Sodium Oxide (Na <sub>2</sub> O)	.069%
Titanium Oxide (TiO <sub>2</sub> )	Traces
Calcium Oxide (CaO)	0.012%
Magnesia (MgO)	0.33%
Moisture at 100oC	0.25%
Phosphorus (P)	0.03%
Sulphur (S)	0.01%
Graphite Carbon (C)	0.44%
Loss on Ignition (H <sub>2</sub> O)	2.27%

**SEIVE ANALYSIS ON US MESH:****US MESH #60 - 06%.****US MESH #35 - 36%.****US MESH #18 - 90%.****US MESH #12 - 99.5 - 100%.****OR AS PER BUYERS REQUIREMENTS.****DATED: 01<sup>ST</sup> August 2018,****BEAWAR (RAJASTHAN)-305901, INDIA.**