



## PURCHASE SPECIFICATION SILICON COMPOUND

DEPT : Composites

SEC : EL/CI/SC/01

REV : 01

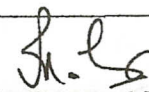
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1.0 Purpose : To manufacture Polymer composite Insulators by Mould in place technology using the injection molding machine for products such as Long rod Insulators up to 400 kV for transmission lines BOTH Tension and Suspension, using Silicone Rubber compound and FRP Rods.

2.0 Material preparation : HTV type silicone rubber having at least 40-50 % silicon by weight and ATH (Alumina Tri Hydrate) as filler . The Filler should be properly mixed with silicon compound to ensure the uniform distribution of same in the polymer by using proper additives. Thereafter, molding will be done. The material should confirm to the tests specified here in under. The sheath material shall have excellent Hydrophobic and anti-tracking properties.

SI No	Test	Reference Specification	Specified Value
1	Resistance to tracking & erosion	IEC:60587/ASTM:2303	4.5
2	Tear strength (KN/m)	ASTM D 624-B	Min.12
3	Volume resistivity	IEC:60093	$2 \times 10^{13}$
4	Resistance to weathering & UV	ASTM G53-96	No crack to be observed during test duration of 96 Hrs
5	Resistance to flammability	IEC:60707	Burning behavior to be checked
6	Arc Resistance	ASTM 495-1973	> 200 Sec
7	Specific gravity	DIN 52479/D 792	1.52- 1.58
8	Dielectric strength in kV/mm	ASTM D 149/IEC 60243	17.5
9	Hardness (Shore A)	ASTM D 2204	68 ± 7
10	Ultimate elongation	ASTM D 412	Min 100
11	Tensile strength	ASTM D 412	Min 40 kg/sq mm
12	Limited Oxygen index	ASTM D 2863	40% min.

  
 Sr. Dy General Manager  
 Quality & Composites