



Purchase Specification for HTV Silicone Rubber

SECTION	: 1602
Specification No	: EL-CI-SC-01
Rev No	: 02
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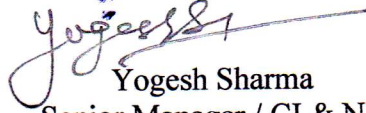
Sl No	Specification	Requirement	
1	Purpose	To Manufacture Polymer Insulators by mould in place technology using Injection molding machine for the product such as Composite Long rod Insulators up to 400 kV for transmission lines both Tension & Suspension, using HTV Silicone Rubber compound and FRP Rod.	
2	Drawings	HTV type silicone rubber having at least 40-50% silicone by weight & ATH (Alumina Tri Hydrate) as filler. The filler should be properly mixed with silicone 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.	
3	Technical Parameters		
Sl No	Test parameter	Reference standard	Specified Value
3.1	Resistance to tracking & erosion	IEC:60587/ASTM:23 03	1A 4.5
3.2	Tear Strength (KN/m)	ASTM D 624-B	Minimum 13
3.3	Volume resistivity	IEC:60093	2×10^{13}
3.4	Resistance to weathering & UV	ASTM G53-96	No crack to be observed during test duration of 96 Hrs
3.5	Resistance to flammability	IEC 60707	Burning Behavior to be Checked
3.6	Arc Resistance	ASTM D 495-1973	>200 Sec

PREPARED BY	APPROVED BY
 R Krishnamurthy Senior Engineer / Composite Insulator	 Yogesh Sharma Senior Manager / CI & NP

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3.7	Specific gravity	DIN 52479/D 792	1.52-1.58
3.8	Dielectric strength in kV/mm	ASTM D 149/EIC 60243	17.5
3.9	Hardness (Shore A)	ASTM D 2204	68 ± 7
3.10	Ultimate elongation	ASTM D 412	Min 125%
3.11	Tensile strength	ASTM D 412	Min 40 Kg/sq mm
3.12	Limited Oxygen index	ASTM D 2863	Min. 40%
3.13	Silicone content by TGA and FTIR method	-	Minimum 30 %
3.14	Compound condition		Compound must be produced such it should be free from air entrapped by extrusion or equivalent process.
4	Packing	Rubber must be packed in plastic sheet properly and further in corrugated boxes.	
5.	Test Certificate	Test certificate of material batch wise will must accompany the supplies.	
6	Material Safety Data Sheet	Latest must accompany the supplies.	

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