

NO.	Test items	Requirements	Test results	Evaluation
1	Visual examination	A viscous liquid with uniform color, no obvious mechanical impurities and flocs, and the coating should be flat, smooth and without bubbles	There are no obvious mechanical impurities and floccules in the liquid state, and the coating is flat, smooth and bubble-free	PASS
2	Vulcanization time test	Surface dry time: no more than 45min (25°C±21°C, 40%-70%RH)	29min	PASS
3	Hydrophobicity test	Hydrophobicity: $\theta_{av} \geq 100^\circ$ $\theta_{min} \geq 90^\circ$ HC:HC1~HC2	HC1	PASS
		Loss of Hydrophobicity: (96h) $\theta_{av} \geq 90^\circ$ $\theta_{min} \geq 85^\circ$	HC2	
		Recovery time: $t \leq 24h$	HC1	
		Migration of Hydrophobicity(96h): $\theta_{av} \geq 110^\circ$ $\theta_{min} \geq 100^\circ$ HC:HC2~HC3	HC1	
4	Volume resistance test($\Omega \cdot m$)	At a temperature of 23±2°C, humidity Under the condition of 60-70%, the volume resistivity is not less than	Volume resistance: $2.9 \times 10^{14} \sim 2.96 \times 10^{14}$ Average: 2.93×10^{14}	PASS
5	Relative dielectric constant and dielectric loss angle tangent test	Relative dielectric constant: ≤ 3.0 , dielectric loss angle tangent: $\leq 0.3\%$	Relative dielectric constant: 2.7 dielectric loss angle tangent: 0.29%	PASS
6	Dielectric strength test	Dielectric strength: $\geq 20KV/mm$	21.1KV/mm ~22.6KV/mm average: 21.6KV/mm	PASS
7	Tracking and erosion test	$\geq TMA4.5$	TMA4.5	PASS

8	Shear strength	$\geq 3.0\text{Mpa}$	2.95~3.95Mpa Average: 3.64Mpa	PASS
9	Adhesion test (circleing method)	$\geq$ class 2	Class 1	PASS
10	Abrasion resistance test	$\leq 0.5\text{g}$	0.120g ~0.170g Average: 0.145g	PASS
11	Corrosion test	Chemical resistance: No loss, wrinkling, blistering, discoloration	No loss, wrinkling, blistering, discoloration	PASS
		Oil resistance: No loss, wrinkling, blistering, discoloration	No loss, wrinkling, blistering, discoloration	
12	Wet flashover voltage comparison test	Wet flashover voltage of coated insulator $\geq$ uncoated insulator	coated insulator, 61KV uncoated insulator: 57KV	PASS
13	Artificial pollution flashover voltage test	$U1/U2 \geq 2.0$	coated insulator $U1=25\text{KV}$ uncoated insulator $U2=12\text{KV}$ $U1/U2=2.1$	PASS
14	Flammability test	According to GB/T13488 : Class FV-1	Class FV-0	PASS
15	Tear strength test	$\geq 12\text{KN/m}$	16.1 KN/m-16.9 KN/m Average: 16.4KN/m	PASS
16	Tensile strength and elongation at break test	Tensile strength $\geq 3.0\text{Mpa}$ elongation at break test $\geq 250\%$	3.996Mpa~4.346Mpa Average: 4.176Mpa 334% ~384%	PASS