

4205TR-10

WATER TREE RETARDANT XLPE COMPOUND FOR 10KV AND BELOW POWER CABLE

Main Properties & Typical Values

Test Items	Unit	Test Method	Standard	Typical value
Tensile strength	MPa	GB/T1040.3	≥13.5	24.3
Elongation at break	%	GB/T1040.3	≥350	514
Heat ageing properties (Test temperature 135℃, 168hr)				
Maximum tensile strength change	%	GB/T8815	±20	8
Maximum elongation at break change	%		±20	0
Heat elongation (200±3)℃ x 15min x 0.2MPa)				
Maximum elongation change under load	%	GB/T2951	≤80	55
Maximum permanent elongation change after cooled	%		≤5	0
Impact brittle temp. (-76℃)	Failure			
Impact brittle	no.	GB/T5470	≤15/30	pass
Dielectric Strength	MV/m	GB/T1408.1	≥25	35
Dielectric loss factor 50Hz, 20℃	--	GB/T1409	≤5×10 ⁻⁴	2.1×10 ⁻⁴
Dielectric constant 50Hz, 20℃	--	GB/T1409	≤2.35	2.24
Volume resistance (20℃)	Ω·m	GB/T1410	≥1×10 ¹⁴	3.1×10 ¹⁴
Gel content	%	JB/T10437	≥80	85
*Relative size of water tree growth	%	Q/GHPX 114	≤50	35

Note: *Technical property meaning: The percentage of water tree growth size of the water tree retardant XLPE compound

All typical values were tested by press moulding sample under the condition of 180±2 ℃, 15min, and pressure over 15MPa, then cooling to room temperature