4205TR-35

WATER TREE RETARDANT XLPE COMPOUND FOR 35KV 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 Maximum elongation at break change	 % %	GB/T8815	 ±20 ±20	 8 0
Heat elongation （200±3)℃ x 15min x 0.2MPa) Maximum elongation change under load Maximum permanent elongation change after cooled	 % %	GB/T2951	 ≤80 ≤5	 55 0
Impact brittle temp. (-76℃) Impact brittle	Failure no.	GB/T5470	 ≤15/30	 pass
Dielectric Strength	MV/m	GB/T1408.1	≥25	35
Dielectric loss factor 50Hz, 20℃	--	GB/T 1409	$\leq 5\times10^{-4}$	2.1×10^{-4}
Dielectric constant 50Hz, 20℃	--	GB/T1409	≤2.35	2.30
Volume resistance (20℃)	Ω·m	GB/T1410	$\geq 1\times10^{14}$	3.1×10^{14}
Gel content	%	JB/T10437	≥80	85
*Relative size of water tree growth	%	Q/GHPX 114	≤50	40

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

Referring to the JB/T10437-2004 standard, the company standard specified that in every 1kg sample of grade 4205TR-35, the impurities with diameter 0.175 ~ 0.250mm must not be more than 5 pieces, the impurities with diameter more than 0.250mm must be zero.
We have strict control over the raw material of product grade 4205TR-35, which has been produced under purified environment. The typical value of product impurity content is:

Particle diameter (mm)	No. of particle
0.175-0.25	1
>0.25	0