

Specification of 345kV XLPE Underground Transmission Cable

conductor	Nominal cross-sectional area (mm ²)	400	600	800	1000	1200	1600	2000	2500
	Shape	Compact-round stranded		4 or 5 segmental compact-round stranded					
	Outside diameter (mm)	24.1	29.5	34.0	38.0	41.7	48.2	53.8	61.2
	Tolerance (mm)	+0.3	0.5			+0.7	+1.0	+1.6	
		-0.3	0.5			-0.7	-1.0	-1.6	
	Unit weight (kg/km)	3654	5466	7100	8772	10512	14020	17576	21970
Thickness of conductor shielding (including semi-conductive tape) (mm)		1.0		2.0				2.5	
Thickness of insulation (mm)		27							
Outside diameter of insulation		80.1	85.5	92.0	96.0	99.7	106.2	111.8	120.2
Tolerance (mm)		+3.0		+3.5				+4.0	
		-3.0		-3.5				-4.0	
Thickness of insulation shielding (mm)		2.0							
Thickness of water-black swelling layer(mm)		0.4							
Concentric shielding Copper wires	Dia. of wire (ϕ mm)	2.3							
	No. of wires	80							
Thickness of binder tape (mm)		0.2							
Thickness of water impervious layer (mm)		0.2							
PVC jacket	Thickness (mm)	5.5			6.0				
	Outside diameter	104.7	110.1	116.6	121.6	125.3	131.8	137.4	145.8
		+3.5		+4.0				+4.5	
		-3.5		-4.0				-4.5	
Electrical characteristic	Max. D.C. conductor resistance at 20°C (Ω/km)	0.0471	0.0308	0.0231	0.0187	0.0156	0.0117	0.00933	0.0075
	Insulation resistance at 15.6 °C (M Ω -km)	2840	2540	2280	2140	2020	1820	1690	1550
	Jacket resistance at 20°C (M Ω -km)	8.8	8.4	7.9	8.3	8	7.6	7.3	6.8
	Max. static electric capacitance (μ F/km)	0.13	0.15	0.17	0.18	0.19	0.21	0.23	0.25
Approx. weight of complete cable (kg/km)		15000	17400	19900	22300	24500	29000	33500	39000



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