

**115 kV COPPER CONDUCTOR WITH COPPER WIRE SHIELD AND LAMINATED ALUMINIUM TAPE, RIBBED OVERSHEATH
TIS 2202-2547 STANDARD**

APPLICATION :

Preferably used for urban networks. Suitable for use in duct, trays and direct burial in ground.

Advantages :

Light weight, small overall diameter and easy to bend. Ribbed type oversheath reduce friction during pulling and provide additional mechanical protection to the cable.

Max. Conductor Temperature :

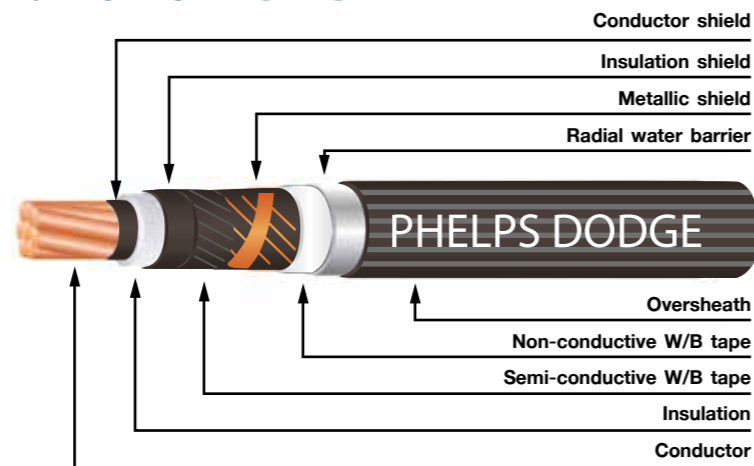
90 °C

AC TEST VOLTAGE :

160 kV (30 minutes)

REFERENCE STANDARD :

TIS 2202-2547



CONSTRUCTION :

- Conductor : Round compact stranded or Milliken conductor
- Conductor shield : Semi-conducting tape and/or extruded semi-conducting cross-linked polyethylene
- Insulation : Cross-linked polyethylene
- Insulation shield : Semi-conducting cross-linked polyethylene
- Metallic shield : Annealed uncoated copper wire with copper contact tape
- Longitudinal water blocking layer : Non-conductive water blocking tape
- Radial water barrier : Plastic-coated aluminium tape
- Oversheath : Black PE (ST-7)

Cable Construction

Nominal cross-sectional area mm ²	Diameter of conductor (Approx.) mm	Nominal thickness of insulation mm	Diameter over insulation (Approx.) mm	Nominal area of copper wire shield mm ²	Nominal thickness of Al sheath mm	Nominal thickness of oversheath mm	Overall diameter (excluding rib) (Approx.) mm	Cable weight (Approx.) kg/km	Standard packing m
400	23.0	16.0	59 - 62	95	0.2	3.5	76 - 81	8,395	1,000/R
500	25.9	16.0	62 - 65	95	0.2	3.5	79 - 84	9,345	1,000/R
630	29.9	16.0	65 - 68	95	0.2	3.5	83 - 88	11,035	1,000/R
800	33.8	16.0	69 - 72	95	0.2	3.5	86 - 91	12,890	500/R
1,000	39.8	16.0	75 - 78	120	0.2	3.6	92 - 97	15,390	500/R
1,200	43.0	16.0	77 - 83	120	0.2	3.8	93 - 101	17,200	500/R

R = Packing in reel

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Electrical Properties and Current Rating (A)

Nominal cross-sectional area mm ²	Maximum DC resistance of conductor at 20°C Ω/km	Minimum insulation resistance at 20°C MΩ-km	Current rating in air* (A)		Current rating direct burial* (A)		Current rating in PE duct in ground* (A)	
			Trefoil ≥0.5xD _c	Flat ≥0.5xD _c	Trefoil 1 m	Flat 1 m	Trefoil 1 m	Flat 1 m
400	0.0470	10,200	782	882	545	577	530	554
500	0.0366	9,490	897	1,019	616	656	602	632
630	0.0283	8,670	1,032	1,184	694	747	684	722
800	0.0221	8,000	1,170	1,359	771	838	769	815
1,000	0.0176	7,160	1,307	1,550	835	926	848	908
1,200	0.0151	6,770	1,395	1,673	879	985	901	970

***CONDITION :**

1. Ambient air temperature 40°C
2. Ground temperature 30°C
3. Thermal resistivity of soil 1.2 K-m/W
4. Depth of laying 1.0 m
5. Axial spacing between phase cable is 2xOD_{cable} or 2xOD_{duct}
6. Metallic shield and/or sheath bonded at single point or cross-bonded (no sheath circulating current).