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GLOSTER CABLES LIMITED

Survey No. 310/E & 293, NH-44, Kallakal (V), Toopran (M), Medak (Dt), T.S - 502 336

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TRANSMISSION CORPORTAION OF ANDHRAPRADESH LIMITED

STANDARDISED TECHNICAL PARTICULARS FOR UNARMOURED COPPER CONTROL CABLES						
S.No.	DESCRIPTION	PARAMETERS / VALUES				
		2C X 2.5 mm^2	4C X 2.5 mm^2	6C X 2.5 mm^2	10C X 2.5 mm^2	12C X 2.5 mm^2
1	Material Description	CONTROL CABLES				
2	a) Type and description of the cable with size	Copper conductor PVC Insulated un-armoured cables as per IS:1554 (P-1) - 1988				
	b) Standards which they conform to	IS:1554 (P 1) - 1988, IS:8130 - 2013, IS:5831 - 1984				
	The type tests should have been conducted not earlier than 5 years in the Standard third party laboratory. The Manufature shall produce the type test reports at the time of acceptance tests					
	c) Quality of material & standard to which conform	BIS				
3	**CONDUCTOR** (Sq.mm)	2C X 2.5	4C X 2.5	6C X 2.5	10C X 2.5	12C X 2.5
	a) Material	Stranded Copper conductor as per IS : 8130 class 2				
	b) Whether stranded	Yes, Stranded				
	c) If so, number of strands (Approx.)	7	7	7	7	7
	d) Nominal Diameter of each strand before stranding (mm)	0.67	0.67	0.67	0.67	0.67
	The type test should have been conducted not earlier than 5 years in the NABL accredited laboratory. The Manufacturer shall produce the type test reports at the time of acceptance tests.	Confirmed				
	e) Max. resistance at 20 Deg.C (Ohms/Km)	7.41	7.41	7.41	7.41	7.41
4	**INSULATION**					
	a) Material	Extruded PVC Type A to IS:5831 - 1984				
	b) Nominal thickness of Insulation (mm)	0.90	0.90	0.90	0.90	0.90
	c) Minimum tensile strength without ageing (N/mm^2) and maximum % variation after ageing	12.50 N/mm^2 & ±20%				
	d) Minimum elongation at break without ageing (%) and maximum % variation after ageing.	150% & ±20%				
	e) Minimum volume resistivity at					
	i) 27 DegC (Ohm-Cm)	$1x10^{13}$				
	ii) Max. rated temperature of 70 Deg.C (Ohm-Cm)	$1x10^{10}$				
	f) Minimum insulation resistance constant at					
	i) 27 Deg C (Mega ohm/Km)	36.7				
	ii) Max. rated temperature of 70 Deg.C (Mega ohm/Km)	0.037				
	iii) Whether application of insulation is by way of extrusion	Yes, Extruded				
5	**INNER SHEATH**					
	a) Material	**PVC as per IS :1554(Part-I)**				
	b) Minimum thickness of inner sheath (mm)	0.30	0.30	0.30	0.30	0.30
	c) Whether method of application is by way of extrusion	Yes, Extruded				

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APTRANSCO/VS/Vijayawada.

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S.No.	DESCRIPTION	PARAMETERS / VALUES				
		2C X 2.5 mm^2	4C X 2.5 mm^2	6C X 2.5 mm^2	10C X 2.5 mm^2	12C X 2.5 mm^2
6	**OUTER SHEATH**					
	a) Material	PVC Type ST-1 as per IS:5831				
	b) Nominal thickness of outer sheath (mm)	1.80	1.80	1.80	2.00	2.00
	c) Minimum tensile strength without ageing (N/mm^2) and maximum % variation after ageing	12.50 N/mm^2 & ±20%				
	d) Minimum elongation of break(%) and maximum variation after ageing (%)	150% & ±20%				
	e) Whether method of application is by way of extrusion	Yes, Extruded				
	f) Are the inner and outer sheaths extruded in a single operation out of the material intended for outer sheaths	**Inner and outer sheath shall be extruded seperately**				
	g) Whether the PVC suitably treated for withstanding the working conditions.	Yes				
	h) Colour	Black				
7	**Physical parameters**					
	a) Min Fictitious dia of core (mm)	3.60	3.60	3.60	3.60	3.60
	b) Min Fictitiou diameter over laid up cores(mm)	7.20	8.70	10.80	14.40	15.00
	c) Min Fictitiou diameter under the outer sheath(mm)	7.80	9.30	11.40	15.00	15.60
	d) Min Fictitiou Overall diameter of the finished cable (mm)	**11.40**	**12.90**	**15.00**	**19.00**	**19.60**
8	**Drum length(mtrs)/tolerance (%)**	**1000 ±10% in general or as per the requirement incase of short lengthts**				
9	**Electrical parameters**					
	a) Rated voltage (Volts)	1100				
	b) Voltage grade (Volts)	1100				
	c) Whether suitable for earthed/Unearthed system	Suitable for Both				
	d) Short circuit current capacity for 1 sec. (K.Amps)	0.29				
	e) Max. Conductor temperature during short circuit condition	160°C				
11	**Marking on Outer Sheath (By Embossing/Printing)**	**As per IS : 1554(Part-1)&"APTRANSCO" to be embossed with an interve interval of one meter throughout the cable**				
12	**Core Identification**	**Cores shall be identified by different coloring of PVC insulation by adopting the following scheme:**				
		a) 2 Cores : Red and Black **b) 4 Cores : Red, Yellow, Blue, Black**				
		c) 6,10 & 12 cores : Two adjacent core (counting and direction core) in each layer, blue and yellow remaining cores gray				

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