

**GUARANTEED TECHNICAL PARTICULARS FOR 1.1 KV GRADE**  
**XLPE Un-armoured cable Size 3.5x70 mm**

Sl. No.	Particulars	<b><u>3.5x70 Sq mm</u></b>
1.	Name & address of manufacturer.	
2.	Type and make of cable	
3.	Location of factory.	
4.	Standard specification to which cable shall conform.	
5.	Standard specification to which core shall conform.	
6.	Voltage rating.	
7.	Permissible variation in voltage, frequency & combined voltage & frequency.	
8.	Standard specification to which drum shall conform.	
9.	<b>CONDUCTOR :</b>	
9.1	Material and its composition.	
9.2	Shape of conductor.	
9.3	Total area of conductor.(In Sq. mm)	
9.4	<b>Stranding details :-</b> i) No. of nominal strands in a core. ii) Dia of each strand in a core (before stranding) (in mm)	
9.5	Maximum D.C Resistance/Core at 20°C (In Ohms/Km.)	
10.	<b><u>INSULATION :</u></b>	
10.1	Type of Insulation	
10.2	Composition of Insulation	
10.3	Nominal thickness of Insulation (in mm).	
10.4	Tolerance on thickness of Insulation.	

10.5	Dia of core over insulation.	
10.6	Minimum volume resistivity at 27°C (Ohm.Cm.)	
10.7	Minimum volume resistivity at 90°C (Ohm.Cm.)	
10.8	Minimum tensile strength of Insulation material.	
10.9	Minimum Elongation percentage	
10.10	Average di-electric strength (KV/MM)	
10.11	Suitability with regard to Moisture, Ozone, Acid, Oil and Alkaline surroundings.	
11.0	<b>SHEATHING DETAILS</b>	
11.1	<b>OUTER SHEATH :</b>	
	i) Material & composition	
	ii) Type of sheathing by extrusion ST-2	
	iii) Thickness of sheathing (in mm)	
	iv) Tolerance on thickness of sheathing.	
	v) Calculated diameter under the sheath (in mm).	
	vi) Nominal diameter of cable over outer sheath (in mm)	
	vii) Whether anti termite treatment has been given in the outer sheath.	
12.	<b>ELECTRICAL PROPERTIES</b>	
	<b>ASSUMED CONDITIONS FOR CURRENT RATING OF CABLES :</b>	
12.1	i) Under continuous full load (in DC)	
	ii) Under transient conditions ( in DC)	
12.2	Thermal resistivity of Soil (DC Cm/W)	
12.3	Thermal Resistivity of XLPE (DC Cm/W)	
12.4	Depth of laying (in Cm.) (To the highest point of cable laid direct in the ground or to the top surface of ducts.	
12.5	<b>Current ratings of the cable under basic assumptions :</b>	
	i) Laid in ground (at ground temp. 30	
	ii) Laid in duct ( duct temp.30°C)Amp.	
	iii) Laid in air (air temp. 40°C) Amp.	
12.6	Rating factors under various conditions of installation.	
12.7	Capacitive reactance per Km. of cable at 50 C/S (Ohms per Km.)	

12.8	Inductive reactance per Km. of Cable at 50 C/S (Ohms per KM)	
13.0	<b>MECHANICAL DATA :</b>	
13.1	Approx overall dia of cable (mm)	
13.2	Minimum bending radius of cable.	
13.3	Minimum guaranteed weight of cable in (Kg/Km.) without any minus tolerance shall be given as per below :-	
	a) Minimum weight of Aluminum (Kg/Km)	
	b) Minimum weight of XLPE (Kg/Km)	
	c) Minimum weight of single core Cable (Kg/Km)	
13.4	Standard drum length of cable (in meters)	
13.5	Tolerance of drum length	
13.6	Approx Total weight of cable drum with cable.	
13.7	Whether identification marking i.e.	
	i) Property of PVVNL	
	ii) Name of manufacture	
	iii) Voltage and grade and size	
	iv) specification no	
	v) Year of manufacture is being provided at the regular intervals of two meters of outer most sheath of cable.	
	vi) Whether length of cable at every interval of 1 meter shall be printed over outer sheath.	
13.8	Name of manufacturers of bought out raw materials.	
	i) Aluminum	
	ii) XLPE	
	iv) Any other.	
13.9	a) Whether similar cable has been type tested Yes/No	
	b) If yes, when and where was it tested.	
	c) It is expected that you will enclose an electro state copy of type test report of similar cable. Please inform whether or not you have entered the same.	
	d) If yes, how many sheets does it contain. No. of sheets.	
	e) Only a design better than or equal to what type tested and proven shall be accepted, please inform whether you will abide by this condition. Yes/No	
13.10	Whether wood preservative shall be applied to whole drum?	

13.11	Whether all ferrous parts shall be treated with rust preventive finish or coating ?	
13.12	Whether waterproof paper layer shall be applied to the surface of drum & over the outer cable layer.	
13.13	Reference of license to use-ISI certification mark, if any.	
13.14	Do you agree to all the provisions of technical specification. In case of any deviation, state clearly.	