

GUARANTEED TECHNICAL PARTICULARS FOR 1.1 KV GRADE SINGLE CORE 240/400
SQMM UN-ARMoured XLPE CABLE

| Sl. No. | Particulars | 1x240 Sq. mm | 1x400 Sq. mm |
|---------|--|-----------------|-----------------|
| 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. | CONDUCTOR : | | |
| 9.1 | Material and its composition. | | |
| 9.2 | Shape of conductor. | | |
| 9.3 | Total area of conductor.(In Sq. mm) | | |
| 9.4 | Stranding details :- 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. | INSULATION : | | |
| 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 | SHEATHING DETAILS | | |
| 11.1 | OUTER SHEATH : | | |
| | 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. | ELECTRICAL PROPERTIES ASSUMED CONDITIONS FOR CURRENT RATING OF CABLES : | | |
| 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. | | |

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| 12.5 | Current ratings of the cable under basic assumptions : | | |
| | 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 | MECHANICAL DATA : | | |
| 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. | | |