

Laboratory **Tempsons Testing Centre, A-190, Road No. 5, M.I.A, Udaipur, Rajasthan**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-8025**

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Validity **23.10.2018 to 22.10.2020**

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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ELECTRICAL TESTING

I.	CABLE AND ACCRSSORIES			
1.	PVC Insulated Unsheathed and sheathed cables/cords, PVC Insulated (HD)Armoured/un armoured cable, XLPE insulated armoured/Unarmoured cable, Elastomeric insulation and sheathed cable and PVC Insulated cables of rated voltage up to and including 450/750V	Annealing test	IS 10810 (Part 1): 1984 IS 8130:1984 Clause 6.1.2	1 mm to 470 mm
		Wrapping test (for aluminum)	IS 10810 (Part 3): 1984 IS 8130:1984 Clause 6.2.2	Qualitative
		Conductor Resistance test	IS 10810 (Part 5) :1984 , IS 8130:1984 Clause 6.3, IEC 60228, IS 1554 (Part 1): 1988, table 6,	0.2 micro ohm to 2000 ohm
		Persulphate test (for tinned copper conductor cable only)	IS 10810 (Part 4): 1984 IS 8130:1984 Clause 6.1.1	0.01 gm/m ² to 5 gm/m ²
		Torsion test on Galvanized steel wire for armouring	IS 10810 (Part 38): 1984 IS 3975:1999 Clause 8.2	1 count to 999 count
		Uniformity of Zinc Coating	IS 10810 (Part 40): 1984 IS 3975:1999 Clause 9.2	Qualitative
		Mass of Zinc Coating on steel wire	IS 10810 (Part 41): 1984 IS 3975:1999 Clause 9.1	0.01 gm/m ² to 200 gm/m ²
		Resistivity & Conductance test of Armour (Wires/Strips)	IS 10810 (Part 42): 1984 IS 3975:1999 Clause 8.4	Upto 250 x 10 ⁻⁶ ohm-cm
		Loss of mass test	IS 10810 (Part 10): 1984, IS 5831:1984 table 1,2, IS 694:2010 table 1, IS 1554 (Part 1): 1988 section 4, IEC 60227-1 TABLE 1 & 2, IEC 60227-5 table 2,6,8,10,12,14, IEC 60811-3-2 Clause 8.1	0.01 gm/m ² to 200 gm/m ²

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		Additional ageing test (OU cables only)	IS 694:2010 clause 10.9	Qualitative
		Tensile strength and elongation at break test	IS 10810 (Part 7): 1984, IS 10810 (Part 37):1984 , IS 10810 (Part 2): 1984, IS 5831:1984 table 1,2, IS 8130:1984 clause 6.2, IS 6380-1984 table 2,3, IS 6380-1984 table 2,3, IS 694:2010 table 1, IS 1554 (Part 1& Section 4): 1988, IS 7098 Part-1 1988 section 4 - table 1, IS 9968 (Part 1): 1988 section 4, IEC 60227-1 TABLE 1 & 2, IEC 60811-1-1,1-2, clause 9.1,8.1, ,IS 975:1999 clause 8.1 table 5	1 N to 2500 N 1 mm to 600 mm
		Ageing in air oven	IS 10810 (Part 11): 1984 IS 5831:1984 table 1, 2, IS 6380:1984 table 2,3, IS 694:2010 table 1, IS 1554:1988 P1 section 4, IS 7098-P1-1988 section 4 - table 1,IS 9968 section 4, IEC 60811-1-2,8.1, IEC 60227-1 table 1,2	1 M to 2500 N , 1 mm to 600 mm
		Shrinkage test	IS 10810 (Part 12): 1984 IS 5831:1984 table 1,2 IS 694:2010 table 1, IS 1554:1988 P1 section 4 IS 7098 (Part 1): 1988 Section 4- table 1	1 mm to 300 mm
		Hot set test	IS 10810 (Part 30): 1984 IS 7098 (Part 1): 1988	1 mm to 300 mm

Vivek Vardhan
Convenor

Alok Jain
Program Manager

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			Section 4- Table 1, IS 6380-1984 Table 2,3, IS 9968:1988 Part 1 section 4	
		Oil resistance test	IS 10810 (Part 31): 1984, IS 6380-1984 Table 2,3, IS 9968 (Part 1): 1988 section 4	1 N to 2500 N 1 mm to 600 mm
		Heat shock test / Heat Resistance	IS 10810 (Part 14): 1984, IS 5831:1984 table 1,2, IS 694:2010 table 1, IS 1554:1988 P1 section 4, IS 7098:1988 P1 Section 4, IEC 60227-1 TABLE 1 & 2, IEC 60811-3-1 clause 9.1	Qualitative (ambient to 350 °C)
		Cold bend test/Bending test at low temperature	IS 10810 (Part 20): 1984, IS 5831:1984 table 1,2, IS 694:2010 table 1, IS 1554 (Part 1): 1988 section 4, IS 7098:1988 P1 section 4-CI 15.4, IEC 60227-1 table 1,2, IEC 60811-1-4 clause 8.1,	Qualitative (-20 °C to 45 °C)
		Cold impact test / Impact test at low temperature	IS 10810 (Part 20): 1984 IS 5831:1984 table 1,2, IS 694:2010 table 1, IS 1554:1988 P1 Section 4, IS 7098:1988 p1 Section 4, IEC 60227-1,2, IEC 60811-1-4 clause 8.5	Qualitative (-20 °C to 45 °C)
		Insulation Resistance test at 500V DC	IS 10810 (Part 43):1984, IS 5831:1984 table 1,2, IS 694:2010 table 1, IS 1554 (Part 1): 1988 section 4, IS 7098 (Part 1):	1 MΩ to 10 ⁸ MΩ

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			1988 section 4 -table 1, IS 6380:1984 tale 1,2,IS 9968:1988 P1 section 4, IEC 60227-2 clause 2.4	
		AC high voltage test(Water immersion test)	IS 10810 (Part 45): 1984 IS 694:2010 clause 10.1, table 1, IS 1554 (Part 1): 1988 Clause 16.3.1, section 4, IS 9968:1988 P1 clause 22.2.1, section 4	Qualitative (0.2 kV to 10.0 kV)
		Temperature Index	IS 10810:1984(Part 64),IS 694:2010 Clause 10.7, Section.4, IS 1554(Part 1):1988 Clause 16.10, IS 7098(Part 1):1988 Clause 16.14(AMD-1), ASTMD 2863	Upto 1000 °C
		Flammability test	IS 10810:1984(Part 53),IS 694:2010 clause 10.4, table 1, IS 1554 P1 1988 clause 16.4, section 4, IS 7098-P1-1988 Section4 - CL16.3, section 4, IS 9968 (Part 1); 1988, section 4, clause 22.3, IEC 60332-1 clause 5.6.3.4	Qualitative
		Oxygen index test Test	IS 10810 (Part 58): 1984, IS 694:2010 clause 10.5, table 1, IS 1554 (Part 1) 1988 clause 16.5, IS 7098 (Part 1): 1988 CL. 16.9 (AMD-1) , ASTMD 2863	21 % to 100 %
		Halogen acid gas evolution	IS 10810 (Part 59):1984, IS 694:2010 clause 10.6,	Upto 100 %

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			IS 1554 (Part 1): 1988 clause 16.9, IS 7098 (Part 1): 1988 clause 16.13	
		Smoke density rating test	IS 13360 (Part 6/Sec.9): 2001, ASTM D 2843, IS 694:2010 Clause 10.8, IS 1554 (Part 1): 1988 Clause 16.11, IS 7098 (Part 1): 1988 Clause 16.15	Upto 100 %

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