Laboratory	**Micro Small and Medium Enterprises Testing Station, MSME DI Campus, Government of India, Ministry of MSME, Rajajinagar, Industrial Estate, Bangalore, Karnataka**
Accreditation Standard	**ISO/IEC 17025: 2005**
Certificate Number	**TC-7939** **Page 1 of 3**
Validity	**26.09.2018 to 25.09.2020** **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
		ELECTRICAL TESTING		
I.	**CABLES AND ACCESSORIES**			
1.	**PVC Insulated Cables for Working Voltages Upto and Including 1100 V**	Annealing - Copper	IS 694:2010/IS 5831:1984 IS 8130:2013 IS 10810 (Part 1): 1984	100 N to 2500 N 20 mm to 200 mm
		Tensile - Aluminium	IS 10810 (Part 2): 1984	100 N to 2500 N
		Wrapping - Aluminium	IS 10810 (Part 3): 1984	Qualitative
		Conductor Resistance - Copper & Aluminium	IS 10810 (Part 5): 1984	1 mΩ to 1800 Ω
		Overall Dimension and thickness of Insulation	IS 10810 (Part 6): 1984	0.02 mm to 25 mm
		Physical test for Insulation & Sheath		
		- Tensile Strength - Elongation at break	IS 10810 (Part 7): 1984	100 N to 2500 N 20 mm to 200 mm 1 % to 300 %
		Loss of Mass	IS 10810 (Part 10): 1984	25 °C to 200 °C 10 mg to 200 g
		Ageing in air oven	IS 10810 (Part 11): 1984	25 °C to 200 °C 20 mm to 200 mm
		Shrinkage	IS 10810 (Part 12): 1984	25 °C to 200 °C 20 mm to 300 mm
		Heat Shock	IS 10810 (Part 14): 1984	25 °C to 200 °C
		Hot-deformation	IS 10810 (Part 15): 1984	25 °C to 200 °C 0.02 mm to 25mm
		Insulation Resistance	IS 10810 (Part 43): 1984	Upto 200 GΩ at 500 V_{dc}
		High Voltage - Water Immersion	IS 10810 (Part 45): 1984	0.5 kV to 10 kV Ambient to 80 °C/240 hrs
		Flammability	IS 10810 (Part 53): 1984	10 mm to 1000 mm

Sreeram Pinnamaraju
Convenor

Alok Jain
Program Manager

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	**PVC Insulated (Heavy Duty) Electric Cables**	Annealing - Copper	IS 1554 (Part 1): 1988 IS 8130: 2013 IS 10810 (Part 2): 1984	100 N to 2500 N 20 mm to 200 mm
		Tensile - Aluminium	IS 10810 (Part 3): 1984	100 N to 2500 N
		Wrapping - Aluminium	IS 10810 (Part 4): 1984	Qualitative
		Conductor Resistance - Copper & Aluminium	IS 10810 (Part 5): 1984	1 mΩ to 1800 Ω
		Thickness of Insulation and sheath	IS 10810 (Part 6): 1984	0.02 mm to 25 mm
		Armoring wires strips	IS 3975: 1999 IS 5831: 1984	Qualitative
		Tensile	IS 10810 (Part 37): 1984	100 N to 2500 N
		Torsion on Galvanized steel	IS 10810 (Part 38): 1984	Qualitative
		Resistivity at 20 °C for Armour wires - Round wires only	IS 10810 (Part 42): 1984	$0.1X10^6$ Ω-cm to $14.5X10^6$ Ω-cm
		Mass of Zinc coating on steel armour	IS 10810 (Part 41): 1984	10 mg to 200 g
		Uniformity of Zinc coating on steel armour	IS 10810 (Part 40): 1984	Qualitative
		Dimension, thickness & width of armour	IS 10810 (Part 36): 1984	0.02 mm to 200 mm
		Physical Test for Insulation and Outer Sheath		
		- Tensile strength - Elongation at break	IS 10810 (Part 7): 1984	100 N to 2500 N 1 % to 300 %
		Loss of Mass	IS 10810 (Part10): 1984	25 °C to 200 °C 10 mg to 200 g
		Ageing in air oven - Tensile strength - Elongation	IS 10810 (Part 11): 1984	25 °C to 200 °C 50 N to 2500 N

Laboratory	**Micro Small and Medium Enterprises Testing Station, MSME DI Campus, Government of India, Ministry of MSME, Rajajinagar, Industrial Estate, Bangalore, Karnataka**
Accreditation Standard	**ISO/IEC 17025: 2005**
Certificate Number	**TC-7939** **Page 3 of 3**
Validity	**26.09.2018 to 25.09.2020** **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
		Shrinkage	IS 10810 (Part 12): 1984	25 °C to 200 °C 0.2 mm to 300 mm
		Heat shock	IS 10810 (Part 14): 1984	25 °C to 200 °C
		Hot deformation	IS 10810 (Part 15): 1984	25 °C to 200 °C 0.02 mm to 25 mm
		Insulation Resistance	IS 10810 (Part 43): 1984	1 MΩ to 200 GΩ at 500 V_{dc}
		High Voltage -Water Immersion	IS 10810 (Part 45): 1984	0.5 kV to 10 kV Ambient to 80 °C
		Flammability	IS 10810 (Part 53): 1984	20 mm to 1000 mm 10 mg to 200 g

Sreeram Pinnamaraju
Convenor

Alok Jain
Program Manager