

FLEXIBILITY AND ADHERENCE MANDREL WINDING TEST REQUIREMENTS FOR ENAMELLED ROUND WINDING WIRES (BASIS: IS 13730-.. AND IS 13778 – 3)

Nominal Conductor Diameter				Elongation	Mandrel Winding Test Requirement According to IS 13730-..	
Over	Up to & Including	From	Up to & Including		Before Mandrel winding	
					Part 34: Polyester copper wires, Class 130L	Part 9: Polyester aluminium Wires, Class 130
					Part 3: Polyester copper wires, Class 155	Part 15: Polyesterimide aluminium Wires, Class 180
					Part 20: Polyurethane solderable copper wires, Class 155	
					Part 8 : Polyesterimide copper wires, Class 180	
					Part 13: Dual coated PE (I) + PAI copper wires, Class 200	
(mm)		(SWG)		(%)		
0.05	0.063	47	46	15	0.150 mm	3d
0.063	0.08	-	45	10	0.150 mm	3d
0.08	0.112	44	41	5	0.150 mm	3d
0.112	0.14	40	39	0	0.150 mm	3d
0.14	1.6	38	17	0	1 x d	3d
1.6	5	16	14	0	32% linear elongation	15% linear elongation
Notes:						
1. Definition of crack: An opening in the insulation, which exposes the conductor to view at the stated magnification.						
2. Magnification : 10-15 times for Conductor dia. Up to & including 0.04 mm						
6 – 10 times for Conductor dia. over 0.040 mm up to & including 0.5 mm						
Normal vision or up to 6 times for Conductor dia. over 0.5 mm dia.						