

CAPTAIN®

Captain Insulators Pvt Ltd **Super Enamelled Copper and Aluminium Winding Wires**

Captain Insulators private limited is one of the leading manufacturer of Copper & Aluminum Enamelled Winding Wires in India, marketed under its brand CAPTAIN. Established in 1977, CAPTAIN is a leading player in the organised sector with a focus on quality and service. We have a manufacturing unit in SIDCUL, Hardiwar spread over an area of 4000 m2 and Cu manufacturing potential of 300 MT/month. We provide a wide range of products to meet the needs of the industry. From initial manufacturing techniques to final quality checks, we make sure our goods are reliable and exceptional. We're proud to be one of the best-known names in the industry.



PRODUCT RANGE

CAPTAIN®

Enamel Base	Polyester	Modified Polyester	Polyurethane (solderable)	Polysterimide	Dual Coat (THEIC Polyester imide+ Polyamide-imide)
Temperature Index	130°	155°	155	180°	200°
Thermal Class	B	F	F	H	H+
Colour	Light Brown to Brown	Brown	Brown	Brown	Light Brown
Range	0.122mm to 1.2mm	0.122mm to 1.2mm	0.122mm to 0.8mm	0.122mm to 1.2mm	0.122mm to 1.2mm
I.S. Specification	I.S. - 13730 PT-34	I.S. - 13730 PT-3	I.S. - 13730 PT-20	I.S. - 13730 PT-8	I.S. - 13730 PT-13
Abrasive Resistance Flexibility Solvent Resitance	Good	Good	Good	Very Good	Excellent
Application	All General Electric Equipment	General Purpose Rotating and Static Electrical Equipment	Static Electrical Equipment	For FHP Motors, Hand Tools, Electromagnetic Coils	Special Motors including hermetic motors, High Speed Winding machines
Special	Ideal for Rewinders	Balanced Elecetrcial & Mechanical Properties Good for O.E.Ms	Good Solderability, UL approved	Higher Thermal Endurance Excels in Thermoplastic Flow, Abrasion & Heat Stock	Very High Thermal Property, Excellent for Hermetic use, UL approved



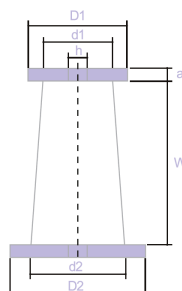
Product

Bare copper Wire - 0.13 mm to 1.6mm
 Enamelled Copper Wire - 0.13 mm to 1.0 mm
 Enamelled Aluminium Wire - 0.19 mm to 1.2 mm

Class of Insulation

Polyster : Class 130
 Modified Polyester: Class 155
 Polyerethane : Class 155
 Polyester Imide: Class 180
 Dual Coat(Polyamide-imide): Class200

Spool Dimensions



Bobbin	Flange Diameter	Barrel Diameter	Inside Width	Flange Thickness	Hole Diameter	Max Wt. of Enamelled Wire per Spool
	D(mm)	D(mm)	W(mm)	a(mm)	h(mm)	kg
PT-4	D1 124 D2 140	d1 74 d2 86	170	15	26	4
PT-10	D1 160 D2 180	d1 96 d2 110	200	15	30	10
PT-15	D1 180 D2 200	d1 96 d2 110	198	15	30	15
PT-25	D1 214 D2 230	d1 110 d2 180	250	15	34	25

We at CaptainInsulators take pride in the quality of our winding wires and our commitment to excellence. We utilize only the best materials and manufacturing processes to ensure our products meet the highest standards of quality. We are also proud to hold various certifications that demonstrate our dedication to producing top-quality products. At CaptainInsulators, we take pride in our commitment to producing high-quality winding wires. That's why we have earned a number of prestigious quality certifications that demonstrate our ongoing dedication to excellence.



**Inline Testing and
Quality Control**



Scan QR for process video

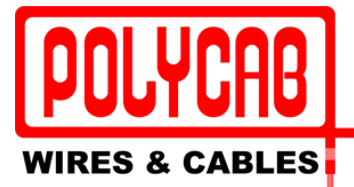


Impact of Conductor Diameter & Tolerance on increase in Diameter of Enamelled Round Winding Wire (Basis: IS 13730-0-1 IEC 60317-0-1)

Size in SWG	Conductor Dia (in mm)			Grade - 1 (in mm)		Grade - 2 (in mm)		Grade - 3 (in mm)		Resistance at 20° (CU) Ohms per metre		Resistance at 20° (AL) Ohms per metre		Conductor Wt in Kg/Km (Cu)	Conductor Wt in Kg/Km (Al)
	Min.	Nominal	Max.	Min. Increase	Max. Overall Dia	Min. Increase	Max. Overall Dia	Min. Increase	Max. Overall Dia	Min.	Max.	Min.	Max.		
8	4.023	4.064	4.104	0.047	4.152	0.089	4.197	0.119	4.240	0.001	0.001	0.002	0.002	115.36	35.04
9	3.622	3.657	3.693	0.047	3.745	0.087	3.790	0.116	3.828	0.002	0.002	0.003	0.003	93.41	28.37
10	3.218	3.251	3.284	0.046	3.336	0.084	3.380	0.114	3.421	0.002	0.002	0.003	0.003	73.82	22.42
11	2.915	2.946	2.976	0.045	3.029	0.084	3.072	0.127	3.112	0.002	0.003	0.004	0.004	60.62	18.41
12	2.615	2.641	2.667	0.043	2.722	0.081	2.764	0.123	2.803	0.003	0.003	0.005	0.005	48.72	14.8
13	2.313	2.336	2.359	0.042	2.415	0.079	2.455	0.119	2.492	0.004	0.004	0.006	0.007	38.12	11.58
14	2.012	2.032	2.052	0.041	2.108	0.077	2.147	0.116	2.184	0.005	0.006	0.008	0.009	28.84	8.76
15	1.810	1.829	1.848	0.040	1.903	0.075	1.941	0.113	1.977	0.006	0.007	0.010	0.011	23.37	7.1
16	1.607	1.626	1.643	0.039	1.698	0.073	1.735	0.110	1.770	0.008	0.009	0.013	0.014	18.47	5.61
17	1.407	1.422	1.437	0.038	1.492	0.071	1.528	0.107	1.562	0.011	0.011	0.017	0.018	14.12	4.29
18	1.206	1.219	1.232	0.035	1.285	0.067	1.318	0.100	1.350	0.014	0.015	0.023	0.024	10.38	3.15
19	1.005	1.016	1.027	0.034	1.080	0.065	1.113	0.098	1.144	0.021	0.022	0.034	0.035	7.21	2.19
20	0.904	0.914	0.924	0.034	0.976	0.063	1.008	0.095	1.038	0.025	0.027	0.042	0.043	5.84	1.77
21	0.804	0.813	0.822	0.032	0.872	0.060	0.902	0.090	0.931	0.032	0.034	0.053	0.055	4.62	1.40
22	0.703	0.711	0.719	0.030	0.766	0.056	0.795	0.085	0.822	0.042	0.044	0.069	0.072	3.53	1.07
23	0.604	0.610	0.616	0.027	0.659	0.050	0.684	0.075	0.708	0.057	0.060	0.094	0.097	2.60	0.79
24	0.553	0.559	0.565	0.025	0.605	0.047	0.629	0.071	0.652	0.068	0.072	0.111	0.116	2.18	0.66
25	0.502	0.508	0.514	0.025	0.554	0.047	0.578	0.071	0.601	0.082	0.087	0.134	0.141	1.80	0.55
26	0.452	0.457	0.462	0.024	0.501	0.045	0.523	0.067	0.544	0.101	0.108	0.166	0.174	1.46	0.44
27	0.412	0.417	0.422	0.022	0.458	0.042	0.480	0.064	0.500	0.121	0.129	0.199	0.209	1.21	0.37
28	0.371	0.376	0.381	0.021	0.417	0.040	0.435	0.060	0.454	0.149	0.160	0.245	0.258	0.99	0.30
29	0.341	0.345	0.349	0.020	0.382	0.038	0.401	0.057	0.418	0.177	0.189	0.292	0.305	0.83	0.25
30	0.311	0.315	0.319	0.019	0.349	0.035	0.367	0.053	0.384	0.212	0.227	0.349	0.367	0.69	0.21
31	0.291	0.295	0.299	0.019	0.329	0.035	0.347	0.053	0.364	0.241	0.259	0.397	0.419	0.61	0.18
32	0.270	0.274	0.278	0.018	0.306	0.033	0.323	0.050	0.339	0.279	0.301	0.459	0.487	0.52	0.16
33	0.250	0.254	0.258	0.018	0.286	0.033	0.303	0.050	0.319	0.324	0.351	0.533	0.568	0.45	0.14
34	0.230	0.234	0.238	0.017	0.265	0.032	0.281	0.048	0.296	0.381	0.415	0.627	0.671	0.38	0.12
35	0.210	0.213	0.216	0.015	0.241	0.029	0.255	0.043	0.269	0.463	0.498	0.761	0.805	0.32	0.10
36	0.190	0.193	0.196	0.014	0.219	0.027	0.232	0.039	0.245	0.562	0.608	0.924	0.983	0.26	0.08
37	0.170	0.173	0.176	0.013	0.197	0.025	0.210	0.036	0.222	0.697	0.760	1.146	1.228	0.21	0.06
38	0.149	0.152	0.155	0.012	0.174	0.023	0.186	0.033	0.197	0.898	0.989	1.478	1.599	0.16	0.05
39	0.129	0.132	0.135	0.011	0.152	0.021	0.162	0.030	0.171	1.184	1.319	1.948	2.133	0.12	0.04
40	0.119	0.122	0.125	0.010	0.141	0.019	0.151	0.028	0.160	1.381	1.550	2.272	2.507	0.10	0.03
41	0.109	0.112	0.115	0.009	0.130	0.017	0.139	0.026	0.147	1.632	1.848	2.684	2.988	0.09	0.03
42	0.099	0.102	0.105	0.009	0.119	0.017	0.128	0.026	0.136	1.957	2.240	3.220	3.622	0.07	0.02

CAPTAIN[®]

Trusted By Our Clients



LUMINOUS



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