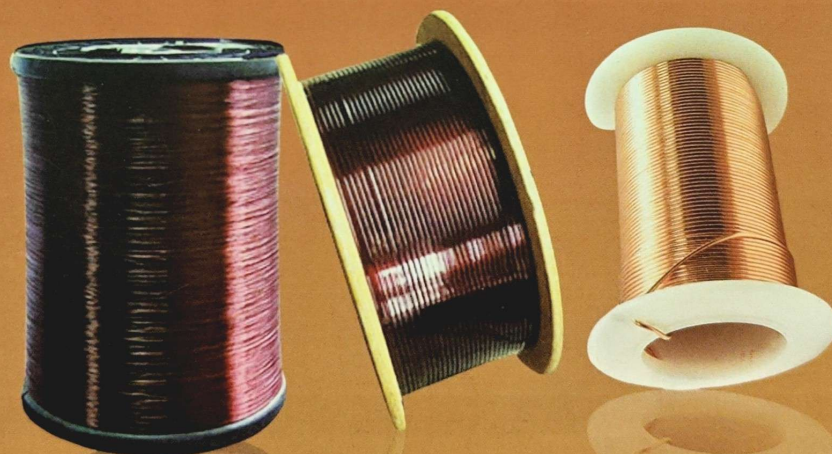




An ISO 9001 : 2008
Certified Company



IZZY METALS PVT. LTD.

MANUFACTURERS OF SUPER ENAMELLED COPPER WINDING WIRES & STRIPS



Izzy Metals Private Limited (IMPL), an ISO 9001 : 2008 certified company, started its commercial production in the year 1996 to manufacture Copper Wires from 2.00 mm to 0.70 mm at Kartarpura Industrial Area, Bais Godown, Jaipur. In the year 2007, company expanded with New High Speed Integrated machines and infrastructural facilities to manufacture Copper Strips from 5 Sq. mm to 65 Sq. mm and extra thick wire up to 6.00 mm at Sarnadungar Industrial Area, Jhotwara Extn. - II, Jaipur.

To further enhance quality and growth we have installed a European High Speed Catalytic Convertor Machine to manufacture dual coated and self solderable wires from 0.80 mm to 0.15 mm. We are fully equipped with latest testing equipments as per IEC, BIS, RDSO & NEMA standard and facility of "Temperature Index Test".

We are proud to have prestigious customers like CLW, BHEL, ABB & OEM's of Transformers, Electric Motors, Servo, UPS and various electrical appliances.

Process

At IMPL, copper wire is drawn from the raw material of highest purity grades Copper Rods sourced from Sterlite Industries Ltd, Birla Copper and Hindustan Copper Ltd. This ensures good surface quality and smooth drawability for efficient winding and operation of wound core. We use only 'Dr. Back' wire Enamels for consistent processing and smooth winding.

We also have provision for Dual Coat processing in our imported Catalytic convertor installed machine carries out enameling which ensures uniform baking and also helps in creating pollution free atmosphere, strict checks being carried out in well equipped quality control before certifying it for despatch.



Testing & Quality Assurance

In our continuous endeavour for growth & quality assurance we have established 'On Line Pin Hole' tester monitoring on computer device in our latest machine. Our wires withstand high thermal and mechanical shock, high dielectric strength, superior thermo-plasticity of insulated film and in solvent test it shows high adherence property. In thermal endurance test our wire withstand high "Temperature Index" data.

We are proud to have prestigious accrediting like NSIC, CLW (RDSO), UL (Under Writers Laboratories, USA), BHEL, ABB.





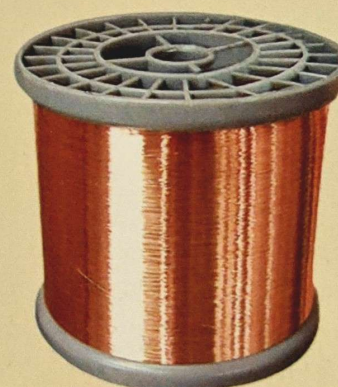
Our product Range Includes

- Enamelled Round Copper Winding Wires.
- Enamelled Rectangular Copper Wires (Strips).
- Enamelled Round Aluminium Winding Wires.
- Bare Round Copper Wires.
- Bare Rectangular Copper Wires (Strips).
- Fibre Glass Insulated Enamelled Wires & Strips.



ENAMELLED ROUND COPPER WINDING WIRES

Particulars	Specification	Range
Polyesterimide over coated with Polyamide-imide Enamelled Round Copper Wire, Class 200	IS 13730/ IEC 60317 Part-13 : 1993	5 swg to 36 swg 5.50 mm to 0.190mm
Polyesterimide Enamelled Round Copper Wire, Class 180	IS 13730/ IEC 60317 Part-8 : 1996	5 swg to 36 swg 5.50 mm to 0.190mm
Polyester Enamelled Round Copper Wire, Class 155	IS 13730/ IEC 60317 Part-3 : 1996	5 swg to 36 swg 5.50 mm to 0.190mm
Polyester Enamelled Round Copper Wire Class 130	IS 13730/ IEC 60317 Part-45 : 1999	5 swg to 36 swg 5.50 mm to 0.190mm





TECHNICAL DATA FOR ENAMELLED WINDING WIRES

SWG	SIZE (mm)	Conductor Tolerance (mm)+	Resistance At 20° C OHM/MTR	GRADE 1 Fine Covering		GRADE 2 Medium Covering		GRADE 3 Thick Covering		For GRADE 2 Wire			Wt. of Enamelled Wire in 1000mt.	SWG (mm).
				Min. INC	Min. O.D.	Min. INC	Min. O.D.	Min. INC	Min. O.D.	Elong. %	B.D.V. (V) Min.	Spring Back		
05.0	5.355	0.054	0.000759	0.051	5.480	0.096	5.528	0.144	5.573	36	2500	5	204.139	5.0
06.0	4.877	0.049	0.000915	0.050	4.970	0.094	5.018	0.142	5.063	36	2500	5	167.440	6.0
07.0	4.470	0.045	0.001089	0.050	4.563	0.094	4.611	0.142	4.656	36	2500	5	140.660	7.0
08.0	4.064	0.041	0.001318	0.060	4.194	0.088	4.228	0.122	4.228	35	2500	5	116.310	8.0
09.0	3.657	0.037	0.001627	0.059	3.780	0.086	3.812	0.118	3.849	35	2500	5	94.228	9.0
10.0	3.251	0.033	0.002059	0.057	3.366	0.084	3.397	0.116	3.435	35	2500	5	74.540	10.0
11.0	2.946	0.030	0.002508	0.045	3.029	0.084	3.072	0.127	3.112	34	2500	5	61.241	11.0
12.0	2.642	0.026	0.003118	0.043	2.742	0.081	2.764	0.123	2.803	34	2500	5	49.304	12.0
12.5	2.489	0.025	0.003513	0.042	2.578	0.08	2.615	0.121	2.653	34	2500	5	43.759	12.5
13.0	2.337	0.023	0.003985	0.041	2.415	0.079	2.455	0.119	2.493	33	5000	5	38.617	13.0
13.5	2.184	0.022	0.004563	0.041	2.262	0.078	2.301	0.117	2.338	33	5000	5	33.726	14.0
14.0	2.032	0.020	0.005271	0.041	2.108	0.077	2.147	0.116	2.184	33	5000	5	29.224	14.5
14.5	1.930	0.019	0.005843	0.040	2.005	0.076	2.044	0.114	2.080	33	5000	5	26.363	15.0
15.0	1.829	0.018	0.006506	0.040	1.903	0.075	1.941	0.113	1.977	33	5000	5	23.700	15.5
15.5	1.727	0.017	0.007297	0.039	1.800	0.074	1.838	0.112	1.873	33	5000	5	21.131	16.0
16.0	1.626	0.016	0.008232	0.039	1.698	0.073	1.735	0.110	1.770	32	5000	5	18.750	16.5
16.5	1.524	0.015	0.009371	0.038	1.695	0.072	1.631	0.108	1.666	32	5000	5	16.472	17.0
17.0	1.422	0.014	0.010764	0.038	1.429	0.071	1.528	0.107	1.562	32	5000	30	14.370	17.5
17.5	1.320	0.013	0.124914	0.038	1.388	0.069	1.423	0.103	1.456	32	5000	30	12.382	17.5
18.0	1.219	0.012	0.014647	0.035	1.285	0.067	1.318	0.100	1.350	31	5000	37	10.581	18.0
18.5	1.117	0.011	0.017444	0.035	1.182	0.066	1.215	0.099	1.247	31	5000	37	8.844	18.5
19.0	1.016	0.010	0.021085	0.034	1.080	0.065	1.113	0.098	1.114	30	5000	41	7.372	19.0
19.5	0.965	0.010	0.023372	0.034	1.028	0.064	1.060	0.096	1.091	30	5000	41	6.661	19.5
20.0	0.914	0.009	0.026053	0.034	0.976	0.063	1.008	0.095	1.038	30	5000	45	5.973	20.0
20.5	0.863	0.009	0.029223	0.033	0.924	0.061	0.955	0.093	0.931	30	5000	45	5.324	20.5
21.0	0.813	0.008	0.032929	0.032	0.872	0.060	0.902	0.090	0.984	29	5000	48	4.735	21.0
21.5	0.762	0.008	0.037484	0.031	0.819	0.058	0.848	0.087	0.876	29	5000	48	4.160	21.5
22.0	0.711	0.007	0.043054	0.030	0.766	0.056	0.795	0.085	0.822	28	4900	43	3.630	22.0
22.5	0.661	0.007	0.049814	0.028	0.712	0.053	0.739	0.080	0.765	28	4900	43	3.137	22.5
23.0	0.610	0.006	0.058492	0.027	0.659	0.050	0.684	0.075	0.708	27	4800	50	2.680	23.0
23.5	0.584	0.006	0.063816	0.026	0.623	0.048	0.656	0.073	0.680	27	4800	50	2.457	23.5
24.0	0.559	0.006	0.069651	0.025	0.605	0.047	0.629	0.073	0.652	26	4600	44	2.256	24.0
25.0	0.508	0.005	0.084338	0.025	0.554	0.047	0.578	0.071	0.601	26	4600	44	1.866	25.0
26.0	0.457	0.056	0.104213	0.024	0.501	0.045	0.523	0.071	0.544	25	4600	47	1.512	26.0
27.0	0.417	0.004	0.125164	0.022	0.458	0.042	0.480	0.067	0.500	25	4400	48	1.260	27.0
28.0	0.376	0.004	0.153949	0.021	0.417	0.040	0.435	0.064	0.545	24	4400	50	1.027	28.0
29.0	0.345	0.004	0.182858	0.020	0.382	0.038	0.401	0.060	0.418	23	4300	53	0.867	29.0
30.0	0.315	0.004	0.219347	0.019	0.349	0.035	0.367	0.057	0.384	23	4100	55	0.725	30.0
31.0	0.295	0.003	0.250097	0.019	0.329	0.035	0.347	0.053	0.364	23	4100	55	0.637	31.0
32.0	0.274	0.003	0.289903	0.018	0.306	0.033	0.323	0.053	0.339	22	4000	53	0.550	32.0
33.0	0.254	0.003	0.337354	0.016	0.286	0.033	0.303	0.050	0.319	22	4000	53	0.474	33.0
34.0	0.234	0.002	0.397486	0.017	0.265	0.032	0.281	0.048	0.296	22	3900	56	0.403	34.0
35.0	0.213	0.002	0.479727	0.015	0.241	0.029	0.255	0.043	0.269	21	3700	59	0.335	35.0
36.0	0.193	0.002	0.584304	0.014	0.216	0.027	0.232	0.039	0.245	21	3500	62	0.275	36.0

TAPER BARRELLED SPOOLS



Size Range (mm)	IEC 60264-3-2 (Taper Barrelled Spools)	As per JIS Spools (Refer figure 1)
0.800 to 0.400	200/315, 250/400, 315/500 & 400/630	PT - 90
0.400 to 0.130	200/315, 250/400, 315/500 & 400/630	-----

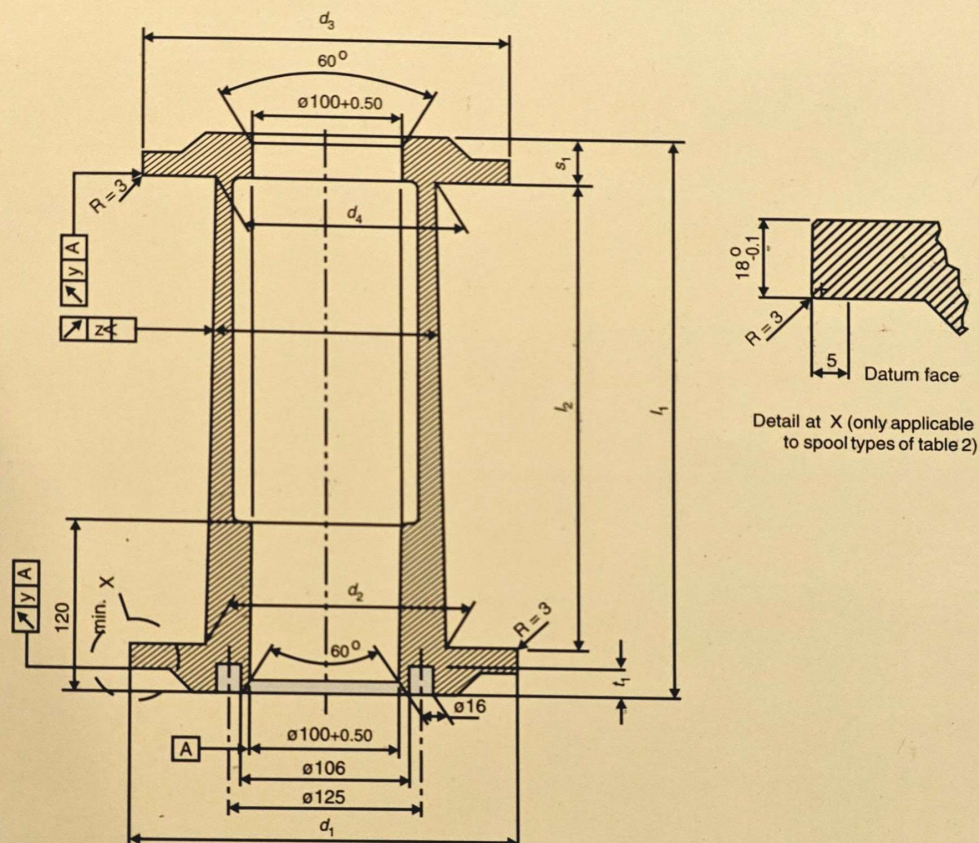


Table 1 : Dimensions of Taper Barrelled Spools (Returnable) (See Figure 1)

Spool Type	Dimensions (mm)										Net Weight, Max. (Kg.)	
	d ₁	d ₂	d ₃	d ₄	l ₁	l ₂		t ₁	s ₁	z		y
					max.	Nom.	Tol.		max.			
200/315	200	125	190	112	315	265	+0.30	7	25	0.4	0.3	25
250/400	250	160	236	140	400	335	+0.50	15	32.5	0.6	0.4	45
315/500	315	200	300	180	500	425	+0.80	20	37.5	1.0	0.6	90
400/630	400	250	375	224	630	530	+1.00	30	50	2.0	1.0	180
500/800	500	315	475	280	800	670	+2.00	30	65	2.5	1.5	400



TECHNICAL DATA FOR ENAMELLED RECTANGULAR COPPER WINDING WIRES (STRIPS)

Thermal Class	155	180	200
Chemical Base of Enamel	Modified Polyester	Polyesterimide	Polyesterimide/ Polyamide-imide

Size Range

Width (W) (mm)	2.00 – 16.00	2.00 – 16.00	2.00 – 16.00
Thickness (T) (mm)	0.80 – 5.60	0.80 – 5.60	0.80 – 5.60
Corner Radius (mm)	0.50 – 1.00	0.50 – 1.00	0.50 – 1.00

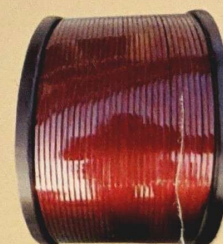
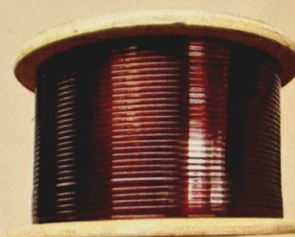
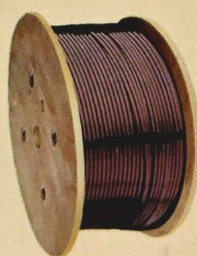
Grade of Covering

Grade I (Fine)	0.06mm – 0.11mm	0.06mm – 0.11mm	0.06mm – 0.11mm
Grade II (Medium)	0.08mm – 0.16mm	0.08mm – 0.16mm	0.08mm – 0.16mm
Heat Sock c-std	175-1/2hr. – 6XW/T- No Crack	175-1/2hr. – 6XW/T- No Crack	175-1/2hr. – 6XW/T- No Crack
Elongation %-std	Min-32	Min-32	Min-32

ENAMELLED RECTANGULAR COPPER WINDING WIRES (STRIPS)

Particulars	Specification	Range
Polyester Enamelled Rectangular Copper Wire (Strips) Class 155	IS 13730/ IEC 60317 Part-16 : 1996	CSA* 5 Sqmm to 65 Sqmm Width 2 mm to 16 mm Thickness 0.80 mm to 5.60 mm
Polyesterimide Enamelled Rectangular Copper Wire (Strips) Class 180	IS 13730/ IEC 60317 Part-28 : 1996	CSA* 5 Sqmm to 65 Sqmm Width 2 mm to 16 mm Thickness 0.80 mm to 5.60 mm
Polyesterimide over coated with Polyamide-imide Enamelled Rectangular Copper Wire (Strips) Class 200	IS 13730/ IEC 60317 Part-29 : 1996	CSA* 5 Sqmm to 65 Sqmm Width 2 mm to 16 mm Thickness 0.80 mm to 5.60 mm

*Cross Sectional Area



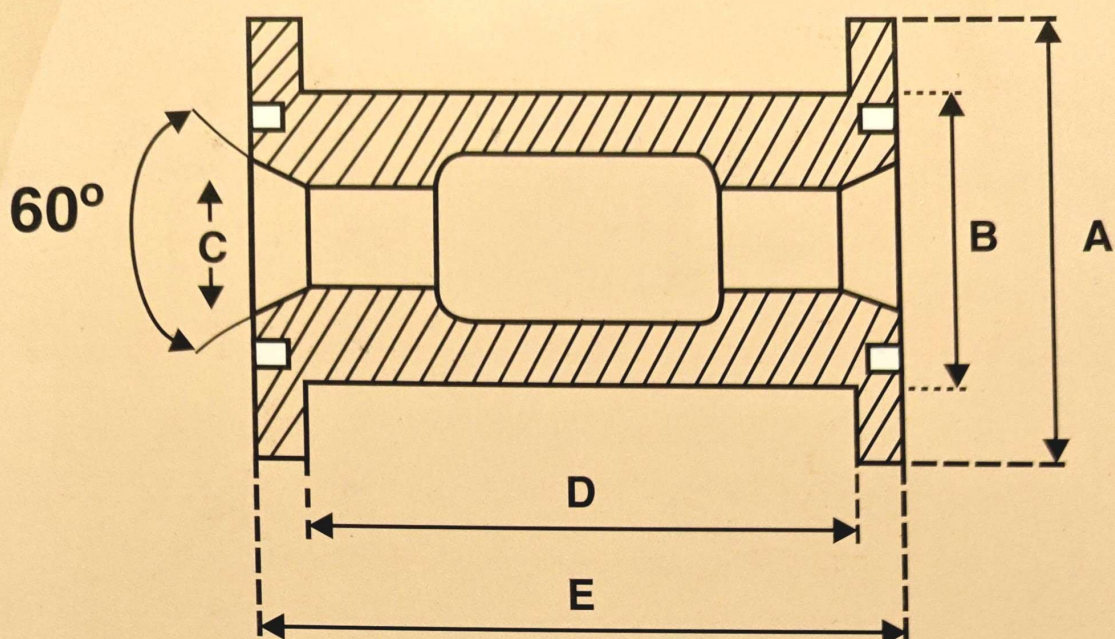


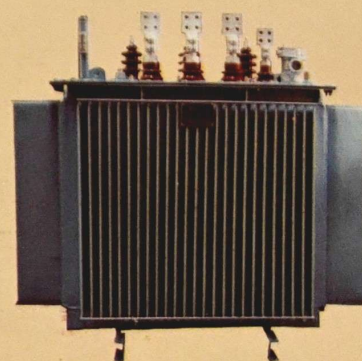
Figure 2 : Indian equivalent Cylindrical Barrelled Plastic Spool

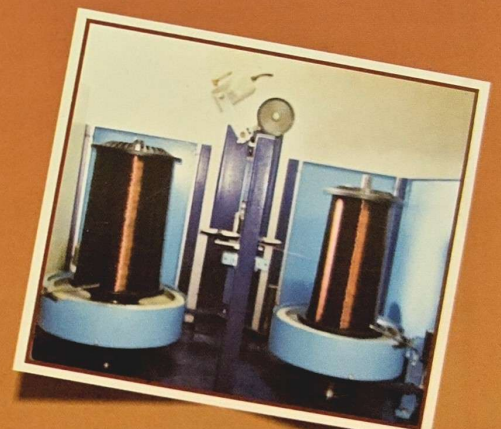
Table 2 : Dimensions of Indian equivalent Cylindrical Barrelled Plastic Spool (See Figure 2)

Spool Type	A mm	B mm	C mm	D mm	E mm	Net Weight, Max. (Kg.)
125	125	65	20	70	95	3
160	160	95	35	102	125	7
250	250	115	40	120	150	20
500	500	300	38	240	276	110

Application of Our Products.

- Hermetic Motors (for refrigeration and air conditioning equipment)
- Rotating Machines (Manufacturer and Repairer)
- Instruments and Audio Coils and Many Others
- Control and Power Supply Transformers
- Power and Distribution Transformers
- Switchgear, Relay & Magnet Coils
- House Hold Appliances
- Electric Hand Tools
- Auto Electricals
- Alternators
- Ballasts
- Fans





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