

Enamelled Copper Wire

pro-POWER



Applications

Suitable for automated soldering equipment used for production/manufacturing of small motors, transformers, relays and magnet coils.

Standard

IEC 60317-0-1:2014
IEC 60317-51
NEMA MW 82-C

Insulation Coatings	: Polyurethane 180
Dimensions	: 0.07mm to 1.6mm Gr 2 (2L)

Mechanical Properties (For 0.3mm)

Elongation	: >30%
Springiness	: <50
Adherence – Flexibility	: Excellent
Resistance to Abrasion	: >67.75N

Electrical Properties

Breakdown Voltage	: 7kV
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Thermal Properties

Temperature Index	: 180
Cut through	: 2min ≥ 230°C
Heat Shock	: 1d, 1/2 h ≥ 200°C

Chemical Properties

Solvent Test	: 4H
Solderability	: 390°
Resistance to Refrigerants	: -

Bare Conductor – Copper Characteristics (Annealed Condition)

Electrical Resistivity @ 20°C	: 0.017241Ωmm ² /m
Temperature Coefficient @ 20°C	: 0.00694°C
Specific Weight	: 8.89 Gr/cm ³
Ultimate Tensile Strength	: 22 – 30 kg/mm ²
Primary Insulation Colour	: Transparent / Natural

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Part Number	Bare Copper Conductor						Enamelled Coat		
	Nominal Conductor Diameter	Conductor Tolerance	Cross Sectional Area	Gauge		Nominal Electrical Resistance	Nominal weight of conductor per 1km @ density 8.89 Gr/cm ³	Min. Diameter Increase	Max. overall Diameter
	mm	mm	mm ²	SWG	AWG	Ω/m @ 20°C	Grams	Grade 2 (2L) mm	Grade 2 (2L) mm
ECW0.2	0.2	0.003	0.03142	35/36	32	0.5441	0.27932	0.027	0.239
ECW0.224	0.224	0.003	0.039413	34/35	31	0.4338	0.35038	0.029	0.266
ECW0.25	0.25	0.004	0.049094	33	30	0.334	0.43644	0.032	0.297
ECW0.315	0.315	0.004	0.077941	30	28	0.2193	0.69289	0.035	0.367
ECW0.4	0.4	0.005	0.12568	27/28	26	0.136	1.11729	0.04	0.459
ECW0.5	0.5	0.005	0.196375	25	24	0.08706	1.74577	0.045	0.566
ECW0.56	0.56	0.006	0.246333	24/25	23/24	0.06736	2.18989	0.047	0.63
ECW0.71	0.71	0.007	0.395971	22	21/22	0.04198	3.52017	0.053	0.789
ECW0.80	0.8	0.008	0.50272	21/22	20	0.03401	4.46918	0.056	0.884
ECW1.0	1	0.01	0.7855	19/20	18	0.02176	6.983095	0.063	1.094
ECW1.25	1.25	0.013	1.227344	17/18	16/17	0.01393	10.91108	0.067	1.349
ECW1.5	1.5	0.015	1.767375	16/17	14/15	0.009	15.71196	0.071	1.606

Part Number Table

Description	CSA	AWG	Reel Length (m)	Part Number
Wire, Copper Enamelled, 35 SWG	0.0357mm ²	32AWG	1,850	ECW0.2
Wire, Copper Enamelled, 34 SWG	0.0428mm ²	31AWG	1,430	ECW0.224
Wire, Copper Enamelled, 33 SWG	0.0506mm ²	30AWG	1,120	ECW0.25
Wire, Copper Enamelled, 30 SWG	0.0779mm ²	28AWG	720	ECW0.315
Wire, Copper Enamelled, 27 SWG	0.136mm ²	26AWG	450	ECW0.4
Wire, Copper Enamelled, 25 SWG	0.203mm ²	24AWG	290	ECW0.5
Wire, Copper Enamelled, 24 SWG	0.246mm ²	23AWG	230	ECW0.56
Wire, Copper Enamelled, 22 SWG	0.396mm ²	21AWG	140	ECW0.71
Wire, Copper Enamelled, 21 SWG	0.515mm ²	20AWG	125	ECW0.80
Wire, Copper Enamelled, 19 SWG	0.815mm ²	18AWG	70	ECW1.0
Wire, Copper Enamelled, 18 SWG	1.17mm ²	16AWG	47	ECW1.25
Wire, Copper Enamelled, 16 SWG	2.08mm ²	15AWG	32	ECW1.5

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