

Reference Information

Bare Copper Wire, Stranded (IEC, Metric)

Wire Size mm ²	Strands/Strand Dia. no./mm	Nominal Cross Section mm ²	Cable Diameter mm	DC Resistance Ω/km @ 20°C	Tensile Strength kgf
10	7/1.4	10.78	4.2	<1.649	>452
16	7/1.7	15.89	5.1	1.150	662
25	7/2.1	24.94	6.4	0.7538	1,035
30	7/2.3	29.09	6.9	0.6180	1,170
35	7/2.5	35.19	7.6	0.5319	1,460
50	19/1.8	49.97	9.0	0.3805	1,970
70	19/2.1	70.27	10.5	0.2795	2,908
95	19/2.5	93.26	12.5	0.1972	3,870
120	19/2.8	120.36	14.2	0.1572	4,986
150	37/2.3	147.11	16.0	0.1259	6,105
185	37/2.5	184.54	17.7	0.1020	7,665
240	37/2.8	232.73	19.8	0.0656	9,658
300	37/3.2	299.43	22.5	0.0518	12,426
400	61/2.9	402.90	26.1	0.0450	15,900
500	61/3.2	490.60	28.8	0.0370	19,300

Bare Copper Wire, Stranded (AWG-American Wire Gauge)

Wire Size AWG	Cross Section MCM	Cross Section mm ²	No. of Strands	Cable Diameter mm	DC Resistance Ω/km @ 20°C	Tensile Strength kgf
10	10.38	5.261	7	2.95	3.478	223
9	13.09	6.632	7	3.30	2.757	280
8	16.51	8.368	7	3.70	2.186	352
7	20.82	10.55	7	4.20	1.734	443
6	26.25	13.30	7	4.70	1.375	557
5	33.10	16.77	7	5.25	1.090	699
4	41.74	21.15	7	5.90	0.8648	879
3	52.63	26.67	7	6.60	0.6857	1,104
2	66.37	33.63	7	7.40	0.5440	1,381
1	83.69	42.41	19	8.45	0.4311	1,769
1/0	105.5	53.48	19	9.45	0.3419	2,223
2/0	133.1	67.42	19	10.6	0.2712	2,790
3/0	167.8	85.03	19	11.9	0.2151	3,492
4/0	211.6	107.2	19	13.4	0.1706	4,362
250MCM		126.6	37	14.6	0.1443	5,244
300MCM		152.0	37	16.0	0.1203	6,291
350MCM		175.4	37	17.3	0.1031	7,285
400MCM		202.7	37	18.5	0.09022	8,310
500MCM		253.4	37	20.7	0.07218	10,210
750MCM		380.0	61	25.4	0.04818	15,460
1000MCM		506.7	61	29.3	0.03609	20,430
1250MCM		633.4	91	32.7	0.02887	25,530
1500MCM		760.0	91	35.9	0.02406	30,640
1750MCM		886.4	127	38.8	0.02062	35,740

Note: 1 MCM=1,000 CM; 1 CM=0.0005067mm², or 1mm² =1973.5 CM or 1.97 MCM

Bare Copper Wire, Solid (AWG-American Wire Gauge)

Wire Gauge AWG	Cross Section Circ. Mils	Cross Section mm ²	Cable Diameter inch	Cable Diameter mm	DC Resistance Ω/km @ 20°C	Tensile Strength kgf
14	4.107	2.081	.0064	1.628	8.615	96.8
13	5.178	2.624	.0719	1.828	6.834	122
12	6.530	3.309	.0808	2.053	5.420	153
11	8.234	4.172	.0907	2.305	4.298	192
10	10.38	5.261	.1019	2.588	3.409	240
9	13.09	6.632	.1144	2.906	2.703	300
8	16.51	8.368	.1285	3.264	2.143	375
7	20.82	10.55	.1443	3.665	1.700	467
6	26.25	13.30	.1620	4.115	1.348	581
5	33.10	16.77	.1819	4.620	1.069	722
4	41.74	21.15	.2043	5.189	0.8478	894
3	52.64	26.67	.2294	5.827	0.6722	1,110
2	66.37	33.63	.2576	6.543	0.5331	1,360
1	83.69	42.41	.2893	7.348	0.4229	1,670
1/0	105.5	53.48	.3249	8.252	0.3317	2,050
2/0	133.1	67.42	.3648	9.266	0.2632	2,500
3/0	167.8	85.03	.4096	10.40	0.2087	3,050
4/0	4,110	107.13	.4600	11.68	0.1655	3,813

Note: 1 MCM=1,000 CM; 1 CM=0.0005067mm² , or 1mm² =1973.5 CM or 1.97 MCM

Standard Reinforcement Bar (Rebar) Sizes

Rebar Size	Diameter mm	Diameter inch	Cross Section Sq. inches	Cross Section mm ²	Equivalent Cu Wire* AWG
3	9.52	0.375	0.11	70.97	9
4	12.7	0.500	0.20	129.03	7
5	15.87	0.625	0.31	199.99	5
6	19.05	0.750	0.44	283.87	3
7	22.22	0.875	0.60	387.09	2
8	25.40	1.000	0.79	509.67	1
9	28.65	1.128	1.00	645.16	1/0
10	32.25	1.270	1.27	819.35	2/0

* Note: Steel has only 8% conductivity relative to copper (Copper=100%, Steel=8%)

DSA Copperweld Wire*

Wire Size	Diameter mm	Diameter inch	Cross Section MCM	Cross Section mm ²	Equivalent Cu Wire* AWG
7/#10	7.8	.306	72.7	36.9	3
7/#8	9.8	.385	115.6	58.7	1
7/#7	11.0	.433	145.7	73.9	1/0
7/#6	12.3	.486	183.8	93.3	2/0
7/#5	13.9	.546	231.7	117.6	3/0
19/#9	14.5	.572	248.8	126.3	3/0
7/#4	15.6	.613	292.2	148.3	4/0
19/#8	16.3	.642	313.7	159.2	4/0
19/#7	18.3	.721	395.5	200.8	250MCM
37/#9	20.3	.801	484.4	245.9	300MCM
19/#6	20.6	.810	498.8	253.2	350MCM
37/#7	25.7	1.01	770.3	391.0	500MCM

* As published by LTV Copperweld

* Note: Steel has only 8% conductivity relative to copper (Copper=100%, Steel=8%)