

Solid & Stranded Specifications

- Conforms to ASTM B-1 for hard drawn, ASTM B-2 for medium hard drawn, ASTM B-2 for soft or annealed copper wire and ASTM B-8 for concentric lay.
- Conforms to Federal Standard QQ-W-343.
- Conforms to National Bureau of Standards Handbook
- Breaking strength and resistance are calculated in accordance with ASTM B-258.

SOLID BARE COPPER										
AWG Size	Cross Sectional			Hard Drawn		Medium Hard Drawn			Soft Drawn (Annealed)	
	Nom. Diameter (in)	Area (Cir. Mils)	Appx. Net Wt. (lb/1000 ft)	Min. Breaking Strength (lb)	Max. DC Resistance @ 20C (ohms/1000 ft)	Min. Breaking Strength (lb)	Max. Breaking Strength (lb)	Max. DC Resistance @ 20C (ohms/1000 ft)	Max. Breaking Strength (lb)	Max. DC Resistance @ 20C (ohms/1000 ft)
36	0.0050	25.0	0.0757	1.4	431	1.2	1.3	429	.78	415
35	0.0056	31.4	0.0949	1.8	344	1.5	1.6	342	.99	331
34	0.0063	39.7	0.120	2.2	272	1.8	2.0	270	1.2	261
33	0.0071	50.4	0.153	2.8	214	2.3	2.6	213	1.6	206
32	0.0080	64.0	0.194	3.5	168	2.9	3.2	168	1.9	162
31	0.0089	79.2	0.240	4.4	136	3.6	4.0	135	2.5	131
30	0.0100	100	0.303	6	108	4.5	5.1	107	3.2	104
29	0.0113	128	0.387	7	84.5	5.6	6.3	84.0	3.9	81.2
28	0.0126	159	0.481	9	67.9	7.1	7.9	67.6	5.0	65.3
27	0.0142	202	0.610	11	53.5	8.9	10	53.2	6.3	51.4
26	0.0159	253	0.765	14	42.7	11	13	42.4	7.9	41.0
25	0.0179	320	0.970	17	33.7	14	16	33.5	10	32.4
24	0.0201	404	1.22	22	26.7	17	20	26.6	13	25.7
23	0.0226	511	1.55	27	21.1	22	25	21.0	15	20.3
22	0.0253	640	1.94	34	16.9	27	31	16.8	19	16.2
21	0.0285	812	2.46	43	13.3	34	39	13.2	24	12.8
20	0.0320	1020	3.10	54	10.5	43	49	10.5	31	10.1
19	0.0359	1290	3.90	68	8.37	54	61	8.32	39	8.05
18	0.0403	1620	4.92	85	6.64	67	76	6.61	49	6.39
17	0.0453	2050	6.21	108	5.26	84	96	5.23	62	5.05
16	0.0508	2580	7.81	135	4.18	106	120	4.16	73	4.02
15	0.0571	3260	9.87	170	3.31	151	165	3.29	99	3.18
14	0.0641	4110	12.4	214	2.63	167	189	2.61	124	2.52
13	0.0720	5180	15.7	268	2.09	209	237	2.07	157	2.00
12	0.0808	6530	19.8	337	1.65	262	297	1.64	197	1.59
11	0.0907	8230	24.9	423	1.31	327	372	1.30	249	1.26
10	0.1019	10,380	31.43	529	1.039	410	467	1.033	314	.9988
9	0.1144	13,090	39.62	660	.8241	513	585	.8199	380	.7925
8	0.1285	16,510	49.98	826	.6532	644	734	.6498	479	.6281
7	0.1443	20,820	63.03	1030	.5180	806	921	.5153	605	.4981
6	0.1620	26,240	79.44	1280	.4110	1010	1154	.4088	762	.3952
5	0.1819	33,090	100.2	1591	.3258	1265	1446	.3243	961	.3134
4	0.2043	41,740	126.3	1970	.2584	1584	1814	.2571	1213	.2485
3	0.2294	52,620	159.3	2439	.2049	1984	2273	.2039	1529	.1971
2	0.2576	66,360	200.9	3002	.1625	2450	2814	.1617	1928	.1563
1	0.2893	83,690	253.3	3688	.1289	3024	3484	.1282	2432	.1239
1/0	0.3249	105,600	319.5	4518	.1011	3731	4311	.1016	2985	.09825
2/0	0.3650	133,100	403	5519	.0802	4600	5330	.0798	3763	.0779
3/0	0.4100	167,800	508	6720	.0636	5666	6590	.0633	4745	.0618
4/0	0.4600	211,600	640	8143	.0505	6980	8143	.0502	5983	.0490

STRANDED BARE COPPER

Size (AWG/MCM)	Stranding	Nominal OD of Strand	Approx. OD (in)	Weight (lbs/Mft)	OHMS / Resistance (per Mft)
36	7/44	0.0020	0.0060	0.085	382.0
34	7/42	0.0025	0.0075	0.132	244.0
32	7/40	0.0031	0.0094	0.203	159.0
	19/44	0.0020	0.0099	0.230	142.0
30	7/38	0.0040	0.0120	0.339	95.40
	19/42	0.0025	0.0120	0.359	90.80
28	7/36	0.0050	0.0150	0.529	61.00
	19/40	0.0031	0.0160	0.553	59.10
26	7/34	0.0063	0.0190	0.841	38.50
	10/36	0.0050	0.0190	0.757	40.40
	19/38	0.0040	0.0200	0.920	35.50
24	7/32	0.0080	0.0240	1.356	23.30
	10/34	0.0063	0.0230	1.201	26.09
	19/36	0.0050	0.0240	1.430	22.70
	41/40	0.0031	0.0240	1.160	25.59
22	7/30	0.0100	0.0300	2.120	15.30
	19/34	0.0063	0.0310	2.280	14.30
	26/36	0.0050	0.0300	1.970	15.94
20	7/28	0.0126	0.0380	3.150	9.600
	10/30	0.0100	0.0410	3.090	10.168
	19/32	0.0080	0.0400	3.680	8.900
	26/34	0.0063	0.0370	3.120	10.05
	41/36	0.0050	0.0370	3.100	10.02
	105/40	0.0032	0.0400	3.200	10.609
18	7/26	0.0159	0.0480	5.360	6.040
	16/30	0.0100	0.0520	4.940	6.740
	19/.0092	0.0092	0.0450	4.900	6.323
	41/34	0.0063	0.0470	4.920	6.600
	65/36	0.0050	0.0460	4.910	6.390
17	168/40	0.0032	0.0520	5.140	6.631
	210/40	0.0032	0.0590	6.400	5.304
16	7/24	0.0201	0.0600	8.560	3.670
	19/.0117	0.0117	0.0560	8.020	4.152
	19/29	0.0113	0.0570	7.350	4.480
	26/30	0.0100	0.0660	8.030	4.000
	65/34	0.0063	0.0600	7.810	4.020
	105/36	0.0050	0.0600	7.950	3.990
14	7/.0242	0.0242	0.0726	12.76	2.480
	7/22	0.0253	0.0760	13.56	2.310
	19/27	0.0142	0.0710	11.59	2.700
	19/.0147	0.0147	0.0700	12.70	2.476
	41/30	0.0100	0.0700	12.40	2.660
	105/34	0.0063	0.0740	12.61	2.490
12	7/20	0.0320	0.0960	21.69	1.450
	19/25	0.0179	0.0900	18.43	1.770
	19/.0185	0.0185	0.0925	20.15	1.564
	65/30	0.0100	0.0910	19.66	1.680
	165/34	0.0063	0.0950	19.82	1.580

STRANDED BARE COPPER

Size (AWG/MCM)	Stranding	Nominal OD of Strand	Approx. OD (in)	Weight (lbs/Mft)	OHMS / Resistance (per Mft)
10	7/.0385	0.0385	0.1160	32.06	1.000
	19/.0234	0.0234	0.1170	32.06	1.000
	37/26	0.0159	0.1100	28.31	1.160
	49/27	0.0142	0.1200	29.89	1.280
	105/30	0.0100	0.1140	31.76	.980
8	7/.0486	0.0486	0.1460	50.10	.650
	19/.0295	0.0295	0.1440	50.00	.650
	54/25	0.0179	0.1506	55.00	.624
	84/27	0.0142	0.1490	52.00	.638
	133/29	0.0113	0.1670	54.00	.640
	168/30	0.0100	0.1740	53.10	.660
6	420/34	0.0063	0.1620	53.00	.680
	7/.0612	0.0612	0.1840	81.10	.410
	19/.0372	0.0372	0.1860	81.10	.400
	133/27	0.0142	0.2100	84.10	.410
	266/30	0.0100	0.2040	83.20	.417
4	665/34	0.0063	0.2150	84.00	.400
	7/.0772	0.0772	0.2320	129.00	.260
	19/.0469	0.0469	0.2350	129.00	.240
	133/25	0.0179	0.2570	135.00	.258
	420/30	0.0100	0.2570	140.00	.264
2	1064/34	0.0063	0.2690	134.00	.266
	7/.0974	0.0974	0.2920	204.90	.162
	19/.0591	0.0591	0.2920	205.00	.170
	133/.0223	0.0223	0.3290	208.00	.166
	665/30	0.0100	0.3380	213.00	.167
1	1666/34	0.0063	0.3370	212.00	.169
	19/.0664	0.0664	0.3320	266.00	.130
	133/.0251	0.0251	0.3800	264.00	.132
	259/.0180	0.0180	0.3780	265.24	.121
	836/30	0.0010	0.3650	266.00	.133
1/0	2107/34	0.0063	0.3760	268.00	.134
	7/.01228	0.1228	0.3690	326.00	.102
	19/.0745	0.0745	0.3730	326.00	.100
	37/.0534	0.0534	0.3700	326.00	.102
	259/24	0.0201	0.4240	331.00	.105
	1064/30	0.0010	0.4510	338.00	.105
2/0	2646/34	0.0063	0.4370	337.00	.106
	7/.1379	0.1379	0.4140	410.90	.081
	19/.0837	0.0837	0.4190	410.90	.081
	37/.0600	0.0600	0.4200	411.00	.080
	259/.0227	0.0227	0.4560	430.00	.083
	1330/30	0.0100	0.4960	430.00	.084
3/0	3325/34	0.0063	0.5340	427.00	.085
	7/.1548	0.1548	0.4650	518.00	.064
	19/.0940	0.0940	0.4700	518.00	.064
	37/.0673	0.0673	0.4700	518.00	.065
	259/.0255	0.0255	0.5360	533.00	.066
	1666/30	0.0100	0.5330	676.00	.067
	4256/34	0.0063	0.6150	547.00	.0674

STRANDED BARE COPPER

Size (AWG/MCM)	Stranding	Nominal OD of Strand	Approx. OD (in)	Weight (lbs/Mft)	OHMS / Resistance (per Mft)
4/0	7/.1739	0.1739	0.5220	653.00	.0510
	19/.1055	0.1055	0.5280	653.00	.0510
	37/.0756	0.0756	0.5290	653.00	.048
	259/.0286	0.0286	0.6010	671.22	.048
	427/.0223	0.0223	0.6020	676.00	.0522
	2107/30	0.0100	0.6700	674.00	.0530
	5320/34	0.0063	0.6450	684.00	.0535
250MCM	19/.1147	0.1147	0.5750	771.00	.0430
	37/.0822	0.0822	0.5750	771.00	.0430
350MCM	19/.1357	0.1357	0.6810	1081.0	.030
	37/.0973	0.0973	0.6810	1081.0	.031
500MCM	19/.1622	0.1622	0.8130	1544.0	.022
	37/.1162	0.1162	0.8130	1544.0	.022
750MCM	61/.1109	0.1109	0.9980	2316.0	.010
1000MCM	61/.1280	0.1280	1.1520	3088.0	.009

AWG to mm²

AWG	mm2	AWG	mm2	AWG	mm2	AWG	mm2	AWG	mm2	AWG	mm2
30	0.05	21	0.38	14	2.5	4	25	3/0	95	600MCM	300
28	0.08	20	0.50	12	4	2	35	4/0	120	750MCM	400
26	0.14	18	0.75	10	6	1	50	300MCM	150	1000MCM	500
24	0.25	17	1.0	8	10	1/0	55	350MCM	185		
22	0.34	16	1.5	6	16	2/0	70	500MCM	240		

Automotive SAE Recommended Conductors

AWG	# of Strands	Nominal OD of Strand
22	7/30	.0100
20	7/28	.0126
18	16/30	.0100
18	19/32	.0080
16	19/29	.0113
14	19/27	.0142
12	19/25	.0179
10	19/23	.0226
8	19/21	.0285
6	37/21	.0285
6	133/27	.0142
4	61/22	.0253
4	133/25	.0179
2	133/23	.0218
1	133/22	.0243
1/0	133/21	.0275
2/0	133/20	.0309
3/0	266/22	.0249
4/0	418/23	.0226