

Standard American Wire Gauge Data for Bare Copper

AWG	Dia-mils	TPI	Dia-mm	Circ-mils	Ohms/Kft	Ft/Ohm	Ft/Lb	Ohms/Lb	Lb/Kft	NormAmps	MaxAmps
0000	459.99	2.1740	11.684	211592	0.0490	20402	1.5613	0.0001	640.48	423.18	482.55
000	409.63	2.4412	10.405	167800	0.0618	16180	1.9688	0.0001	507.93	335.60	382.68
00	364.79	2.7413	9.2657	133072	0.0779	12831	2.4826	0.0002	402.80	266.14	303.48

AWG	Dia-mils	TPI	Dia-mm	Circ-mils	Ohms/Kft	Ft/Ohm	Ft/Lb	Ohms/Lb	Lb/Kft	NormAmps	MaxAmps
0	324.85	3.0783	8.2513	105531	0.0983	10175	3.1305	0.0003	319.44	211.06	240.67
1	289.29	3.4567	7.3480	83690	0.1239	8069.5	3.9475	0.0005	253.33	167.38	190.86
2	257.62	3.8817	6.5436	66369	0.1563	6399.4	4.9777	0.0008	200.90	132.74	151.36
3	229.42	4.3588	5.8272	52633	0.1970	5075.0	6.2767	0.0012	159.32	105.27	120.03
4	204.30	4.8947	5.1893	41740	0.2485	4024.7	7.9148	0.0020	126.35	83.480	95.190
5	181.94	5.4964	4.6212	33101	0.3133	3191.7	9.9804	0.0031	100.20	66.203	75.489
6	162.02	6.1721	4.1153	26251	0.3951	2531.1	12.585	0.0050	79.460	52.501	59.866
7	144.28	6.9308	3.6648	20818	0.4982	2007.3	15.869	0.0079	63.014	41.635	47.476
8	128.49	7.7828	3.2636	16509	0.6282	1591.8	20.011	0.0126	49.973	33.018	37.650
9	114.42	8.7396	2.9063	13092	0.7921	1262.4	25.233	0.0200	39.630	26.185	29.858

AWG	Dia-mils	TPI	Dia-mm	Circ-mils	Ohms/Kft	Ft/Ohm	Ft/Lb	Ohms/Lb	Lb/Kft	NormAmps	MaxAmps
10	101.90	9.8140	2.5881	10383	0.9989	1001.1	31.819	0.0318	31.428	20.765	23.678
11	90.741	11.020	2.3048	8233.9	1.2596	793.93	40.122	0.0505	24.924	16.468	18.778
12	80.807	12.375	2.0525	6529.8	1.5883	629.61	50.593	0.0804	19.765	13.060	14.892

13	71.961	13.896	1.8278	5178.3	2.0028	499.31	63.797	0.1278	15.675	10.357	11.810
14	64.083	15.605	1.6277	4106.6	2.5255	395.97	80.447	0.2031	12.431	8.2132	9.3654
15	57.067	17.523	1.4495	3256.7	3.1845	314.02	101.44	0.3230	9.8579	6.5134	7.4271
16	50.820	19.677	1.2908	2582.7	4.0156	249.03	127.91	0.5136	7.8177	5.1654	5.8900
17	45.257	22.096	1.1495	2048.2	5.0636	197.49	161.30	0.8167	6.1997	4.0963	4.6709
18	40.302	24.813	1.0237	1624.3	6.3851	156.62	203.39	1.2986	4.9166	3.2485	3.7042
19	35.890	27.863	0.9116	1288.1	8.0514	124.20	256.47	2.0648	3.8991	2.5762	2.9376

AWG	Dia-mils	TPI	Dia-mm	Circ-mils	Ohms/Kft	Ft/Ohm	Ft/Lb	Ohms/Lb	Lb/Kft	NormAmps	MaxAmps
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20	31.961	31.288	0.8118	1021.5	10.153	98.496	323.41	3.2832	3.0921	2.0430	2.3296
21	28.462	35.134	0.7229	810.10	12.802	78.111	407.81	5.2205	2.4521	1.6202	1.8475
22	25.346	39.453	0.6438	642.44	16.143	61.945	514.23	8.3009	1.9446	1.2849	1.4651
23	22.572	44.304	0.5733	509.48	20.356	49.125	648.44	13.199	1.5422	1.0190	1.1619
24	20.101	49.750	0.5106	404.03	25.669	38.958	817.66	20.987	1.2230	0.8081	0.9214
25	17.900	55.866	0.4547	320.41	32.368	30.895	1031.1	33.371	0.9699	0.6408	0.7307
26	15.940	62.733	0.4049	254.10	40.815	24.501	1300.1	53.061	0.7692	0.5082	0.5795
27	14.195	70.445	0.3606	201.51	51.467	19.430	1639.4	84.371	0.6100	0.4030	0.4596
28	12.641	79.105	0.3211	159.80	64.898	15.409	2067.3	134.15	0.4837	0.3196	0.3644
29	11.257	88.830	0.2859	126.73	81.835	12.220	2606.8	213.31	0.3836	0.2535	0.2890

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30	10.025	99.750	0.2546	100.50	103.19	9.6906	3287.1	339.18	0.3042	0.2010	0.2292
31	8.9276	112.01	0.2268	79.702	130.12	7.6850	4145.0	539.32	0.2413	0.1594	0.1818
32	7.9503	125.78	0.2019	63.207	164.08	6.0945	5226.7	857.55	0.1913	0.1264	0.1441

33	7.0799	141.24	0.1798	50.125	206.90	4.8332	6590.8	1363.6	0.1517	0.1003	0.1143
34	6.3048	158.61	0.1601	39.751	260.90	3.8329	8310.8	2168.1	0.1203	0.0795	0.0907
35	5.6146	178.11	0.1426	31.524	328.99	3.0396	10480	3447.5	0.0954	0.0630	0.0719
36	5.0000	200.00	0.1270	25.000	414.85	2.4105	13215	5481.7	0.0757	0.0500	0.0570
37	4.4526	224.59	0.1131	19.826	523.11	1.9116	16663	8716.2	0.0600	0.0397	0.0452
38	3.9652	252.20	0.1007	15.723	659.63	1.5160	21012	13859	0.0476	0.0314	0.0359
39	3.5311	283.20	0.0897	12.469	831.78	1.2022	26496	22037	0.0377	0.0249	0.0284

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40	3.1445	318.01	0.0799	9.8880	1048.9	0.9534	33410	35040	0.0299	0.0198	0.0226

LEGEND: AWG = American Wire Gauge size

Dia-mils = Diameter in mils (1 mil = .001 inch)

TPI = Turns Per Inch (Ignoring thickness of unknown insulation)

Dia-mm = Diameter in millimeters (For comparison with non-USA coilers)

Circ-mils = Circular Mils. (circular mils = diameter in mils squared)

Ohms/Kft = Ohms Per 1,000 Feet

Ft/Ohm = Feet Per Ohm

Ft/Lb = Feet Per Pound

Ohms/Lb = Ohms Per Pound

Lb/Kft = Pounds Per 1,000 Feet

NormAmps = Normal Average Amp Capacity based on 500 circular mils per Amp

MaxAmps = Maximum recommended Average Amp Capacity in Open Air based on 438.489 circular mils per Amp