AWG ▮ mm² CONVERSION CHART · 4/0 ▮ 40 AWG

ASTM B258 · IEC 60228 · NEC 310.16 (Cu)

SOURCE · ASTM B258-18 (AWG diameters), IEC 60228:2004 (mm²), NFPA 70 NEC 310.16

d_n = 0.005 × 92^((36 – n) / 39) inches · Area_kcmil = 1000 × d² · 1 kcmil = 0.5067 mm²

AWG	Ø (in)	Ø (mm)	Area (kcmil)	Area (mm²)	60 °C Cu (A)	75 °C Cu (A)	90 °C Cu (A)
4/0	0.4600	11.68	211.60	107.20	195	230	260
3/0	0.4096	10.40	167.80	85.00	165	200	225
2/0	0.3648	9.27	133.10	67.40	145	175	195
1/0	0.3249	8.25	105.60	53.50	125	150	170
1	0.2893	7.35	83.69	42.40	110	130	145
2	0.2576	6.54	66.36	33.60	95	115	130
3	0.2294	5.83	52.62	26.70	85	100	115
4	0.2043	5.19	41.74	21.20	70	85	95
6	0.1620	4.11	26.24	13.30	55	65	75
8	0.1285	3.26	16.51	8.37	40	50	55
10	0.1019	2.59	10.38	5.26	30	35	40
12	0.0808	2.05	6.53	3.31	20	25	30
14	0.0641	1.63	4.11	2.08	15	20	25
16	0.0508	1.29	2.58	1.31	–	–	–
18	0.0403	1.02	1.62	0.8230	–	–	–
20	0.0320	0.812	1.02	0.5190	–	–	–
22	0.0253	0.644	0.6420	0.3260	–	–	–
24	0.0201	0.511	0.4040	0.2050	–	–	–
26	0.0159	0.405	0.2540	0.1290	–	–	–
28	0.0126	0.321	0.1600	0.0810	–	–	–
30	0.0100	0.255	0.1000	0.0509	–	–	–
32	0.00795	0.202	0.0633	0.0320	–	–	–
34	0.00630	0.160	0.0397	0.0201	–	–	–
36	0.00500	0.127	0.0250	0.0127	–	–	–
38	0.00397	0.101	0.0157	0.0080	–	–	–
40	0.00314	0.080	0.0099	0.0050	–	–	–

NOTES

- Sizes 16 AWG and smaller are not in NEC 310.16; use only for fixture / chassis wiring (NEC 402.5).
- Aluminium ampacity ≈ 0.78 × copper at the same temperature column. Not listed below 12 AWG.
- Each 3 AWG step roughly halves the cross-sectional area; each 6 AWG step halves the diameter.
- Closest IEC 60228 metric equivalents: 4 AWG ≈ 25 mm², 6 AWG ≈ 16 mm², 10 AWG ≈ 6 mm², 14 AWG ≈ 2.5 mm².

Reference values for engineering education only. Verify against the official ASTM / IEC / NEC publication before use.