



# HSM Wire International, Inc

Ph: 330-244-8501 Fax: 330-244-8561

[www.hsmwire.com](http://www.hsmwire.com)

## Bare Copper 1/2 sizes Resistance Data

AWG	Diameter (inches)			Resistance* (ohms / 1000 ft.)		
	Min.	Nom.	Max.	Min.	Nom.	Max.
24.0	0.505	0.511	0.513	24.91	25.55	26.19
24.5	0.478	0.483	0.485	27.86	28.60	29.34
25.0	0.450	0.455	0.457	31.37	32.24	33.10
25.5	0.424	0.429	0.432	35.17	36.18	37.19
26.0	0.399	0.404	0.406	39.71	40.89	42.07
26.5	0.378	0.381	0.384	44.58	45.65	46.71
27.0	0.358	0.361	0.363	49.71	50.94	52.17
27.5	0.338	0.340	0.343	55.78	57.20	58.63
28.0	0.318	0.320	0.323	63.02	64.70	66.37
28.5	0.300	0.302	0.305	70.59	72.54	74.48
29.0	0.284	0.287	0.290	78.22	80.45	82.68
29.5	0.267	0.269	0.272	88.79	91.43	94.07
30.0	0.251	0.254	0.257	99.65	102.7	105.8
30.5	0.239	0.241	0.244	110.3	113.8	117.4
31.0	0.224	0.226	0.229	125.5	129.7	133.9
31.5	0.211	0.213	0.216	140.7	145.6	150.5
32.0	0.201	0.203	0.206	154.9	160.6	166.2
32.5	0.188	0.191	0.193	176.0	182.7	189.4
33.0	0.178	0.180	0.183	196.1	203.9	211.7
33.5	0.168	0.170	0.173	219.8	229.0	238.1
34.0	0.157	0.160	0.163	248.2	259.0	269.8
34.5	0.147	0.150	0.152	282.4	295.3	308.3
35.0	0.140	0.142	0.145	312.9	327.9	342.8
35.5	0.132	0.135	0.137	348.6	366.1	383.5
36.0	0.124	0.127	0.130	390.8	411.4	431.9
36.5	0.117	0.119	0.122	441.2	465.7	490.1
37.0	0.112	0.114	0.117	480.4	508.0	535.7
37.5	0.104	0.107	0.109	549.8	583.4	617.0
38.0	0.099	0.102	0.104	604.7	643.3	681.9
38.5	0.091	0.094	0.097	703.9	752.1	800.2
39.0	0.086	0.089	0.091	784.3	840.7	897.1
39.5	0.081	0.084	0.086	879.3	946.1	1013
40.0	0.076	0.079	0.081	992.7	1073	1152
40.5	0.074	0.076	0.079	1058	1145	1233



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	Min.	Nom.	Max.	Min.	Nom.	Max.
41.0	0.069	0.071	0.074	1209	1316	1423
41.5	0.064	0.066	0.069	1394	1527	1659
42.0	0.061	0.064	0.066	1504	1652	1801
42.5	0.058	0.061	0.064	1626	1793	1960
43.0	0.053	0.056	0.058	1922	2137	2352
43.5	0.051	0.053	0.056	2100	2346	2593
44.0	0.048	0.051	0.053	2305	2589	2873
44.5	0.046	0.048	0.051	2541	2871	3201
45.0	0.002	0.002	0.002	3.080	3.348	3.616
45.5	0.002	0.002	0.002	3.472	3.757	4.099
46.0	0.002	0.002	0.002	3.870	4.207	4.544
46.5	0.001	0.001	0.001	4.377	4.733	5.134
47.0	0.001	0.001	0.001	4.868	5.291	5.714
47.5	0.001	0.001	0.001	5.525	5.962	6.453
48.0	0.001	0.001	0.001	6.205	6.745	7.285
48.5	0.001	0.001	0.001	7.008	7.585	8.123
49.0	0.001	0.001	0.001	7.744	8.417	9.090
49.5	0.001	0.001	0.001	8.720	9.386	10.371
50.0	0.001	0.001	0.001	9.734	10.58	11.43
50.5	0.001	0.001	0.001	12.32	13.39	14.46
52.0	0.001	0.001	0.001	15.69	17.05	18.41
53.0	0.001	0.001	0.001	19.48	21.17	22.86
54.0	0.001	0.001	0.001	24.82	26.98	29.14
55.0	0.001	0.001	0.001	31.54	34.28	37.02
56.0	0.000	0.000	0.001	39.73	43.19	46.65
57.0	0.000	0.000	0.000	49.735	54.060	58.385
58.0	0.000	0.000	0.000	62.570	68.011	73.452

Information to be used for a guide only.

All tolerance s are based on **NEMA MW-1000**

\*Resistance based upon copper conductivity of 100% I.A.C.S. Actual vaule may be up to 120% I.A.C.S. 45-58 AWG Theoretical bare wire diameter by resistance.

**1/2 sizes are not readily available. This would be a special order, contact us for more information**

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