

Copperlite™ brand copper-clad aluminum wire represents a strong, innovative advantage in many applications over solid copper wire alone.

Our patented cold cladding technology permanently bonds lightweight, flexible aluminum wire to a concentric layer of highly conductive copper to create components that combine the best qualities of both metals.

Thanks to its remarkable conductivity-to-weight ratio ($\geq 65\%$ IACS at only 41% of the density of pure copper), it is easier to handle and install, which reduces labor costs and cuts shrink. More pliable than pure copper, and without the insulating oxide of pure aluminum, electrical connections are more secure and efficient.

NOTE: Properties noted in these data sheets are **minimum** values for typical products. If your application requires performance values beyond those noted, please contact Copperweld's Engineering Support Center at **engineering@copperweld.com** or **+1.615.377.4200**. Material selection, varying composition and processing conditions all provide flexibility in how Copperweld can deliver exactly the product you need. Copperlite™ conductors from Copperweld offer many distinct advantages, and our engineering team works in concert with our clients to determine the proper components for the stringent requirements of their products.

PHYSICAL AND ELECTRICAL PROPERTIES OF COPPERLITE™ WIRE
15% COPPER BY VOLUME
(METRIC UNITS)

DIAMETER (mm)	WIRE CROSS SECTIONAL AREA (mm ²)	NOMINAL COPPER THICKNESS (mm)	WEIGHT (kg/km)		MAXIMUM DC RESISTANCE (Ω /km)		DIAMETER (mm)
			15% COPPERLITE	COPPER	15% COPPERLITE	COPPER	
8.0	50.2655	0.320	182.87	446.86	0.543	0.364	8.0
7.5	44.1786	0.300	160.72	392.75	0.618	0.414	7.5
7.0	38.4845	0.280	140.01	342.13	0.710	0.475	7.0
6.5	33.1831	0.260	120.72	295.00	0.823	0.551	6.5
6.0	28.2743	0.240	102.86	251.36	0.966	0.647	6.0
5.5	23.7583	0.220	86.433	211.21	1.149	0.770	5.5
5.0	19.6350	0.200	71.432	174.55	1.391	0.932	5.0
4.5	15.9043	0.180	57.860	141.39	1.717	1.150	4.5
4.0	12.5664	0.160	45.716	111.72	2.173	1.456	4.0
3.5	9.6211	0.140	35.002	85.532	2.838	1.901	3.5
3.0	7.0686	0.120	25.716	62.840	3.863	2.588	3.0
2.5	4.9087	0.100	17.858	43.639	5.563	3.727	2.5
2.0	3.1416	0.080	11.429	27.929	8.693	5.823	2.0
1.9	2.8353	0.076	10.315	25.206	9.632	6.452	1.9
1.8	2.5447	0.072	9.258	22.622	10.73	7.189	1.8
1.7	2.2698	0.068	8.258	20.179	12.03	8.060	1.7
1.6	2.0106	0.064	7.315	17.874	13.58	9.099	1.6
1.5	1.7671	0.060	6.429	15.710	15.45	10.35	1.5
1.4	1.5394	0.056	5.600	13.685	17.74	11.88	1.4
1.3	1.3273	0.052	4.829	11.800	20.57	13.78	1.3
1.2	1.1310	0.048	4.114	10.054	24.15	16.18	1.2
1.1	0.9503	0.044	3.457	8.448	28.74	19.25	1.1
1.0	0.7854	0.040	2.857	6.982	34.77	23.29	1.0
0.9	0.6362	0.036	2.314	5.656	42.93	28.76	0.9
0.8	0.5027	0.032	1.829	4.469	54.33	36.39	0.8
0.7	0.3848	0.028	1.400	3.421	70.96	47.54	0.7
0.6	0.2827	0.024	1.029	2.514	96.58	64.70	0.6
0.5	0.1963	0.020	0.714	1.746	139.1	93.17	0.5
0.4	0.1257	0.016	0.457	1.117	217.3	145.6	0.4
0.3	0.0707	0.012	0.257	0.628	386.3	258.8	0.3
0.2	0.0314	0.008	0.114	0.279	869.3	582.3	0.2
0.1	0.0079	0.004	0.029	0.070	3,477	2,329	0.1



SPECIFICATIONS:

ASTM B-566 Copper Clad Aluminum Wire

PHYSICAL AND ELECTRICAL PROPERTIES OF COPPERLITE™ WIRE

15% COPPER BY VOLUME
(US/IMPERIAL UNITS)

AWG	DIAMETER (in)	WIRE CROSS SECTIONAL AREA		NOMINAL COPPER THICKNESS (in)	WEIGHT (lbs/1000 ft)		MAXIMUM DC RESISTANCE (Ω/1000 ft)		AWG
		SQUARE INCHES (in ²)	CIRCULAR MILS (cmil)		15% COPPERLITE™	COPPER	15% COPPERLITE™	COPPER	
0	0.3249	0.082907	105,560	0.01300	130.8	319.6	0.156	0.104	0
1	0.2893	0.065733	83,694	0.01157	103.7	253.4	0.196	0.131	1
2	0.2576	0.052117	66,358	0.01030	82.24	200.9	0.248	0.166	2
3	0.2294	0.041331	52,624	0.00918	65.22	159.3	0.312	0.209	3
4	0.2043	0.032781	41,738	0.00817	51.73	126.4	0.394	0.264	4
5	0.1819	0.025987	33,088	0.00728	41.01	100.2	0.496	0.333	5
6	0.1620	0.020612	26,244	0.00648	32.53	79.45	0.626	0.419	6
7	0.1443	0.016354	20,822	0.00577	25.81	63.03	0.789	0.528	7
8	0.1285	0.012969	16,512	0.00514	20.46	49.99	0.995	0.666	8
9	0.1144	0.010279	13,087	0.00458	16.22	39.62	1.255	0.841	9
10	0.1019	0.008155	10,384	0.00408	12.87	31.43	1.582	1.060	10
11	0.0907	0.006461	8,226	0.00363	10.20	24.90	1.997	1.338	11
12	0.0808	0.005128	6,529	0.00323	8.091	19.76	2.516	1.685	12
13	0.0720	0.004072	5,184	0.00288	6.425	15.69	3.169	2.123	13
14	0.0641	0.003227	4,109	0.00256	5.092	12.44	3.998	2.678	14
15	0.0571	0.002561	3,260	0.00228	4.041	9.870	5.038	3.375	15
16	0.0508	0.002027	2,581	0.00203	3.198	7.812	6.365	4.264	16
17	0.0453	0.001612	2,052	0.00181	2.543	6.212	8.005	5.362	17
18	0.0403	0.001276	1,624	0.00161	2.013	4.917	10.11	6.775	18
19	0.0359	0.001012	1,288	0.00144	1.596	3.899	12.75	8.543	19
20	0.0320	0.000802	1,021	0.00128	1.266	3.092	16.08	10.77	20
21	0.0286	0.000644	820	0.00115	1.017	2.483	20.02	13.41	21
22	0.0253	0.000505	642	0.00101	0.796	1.945	25.57	17.13	22
23	0.0226	0.000400	509	0.00090	0.631	1.542	32.24	21.60	23
24	0.0201	0.000317	404	0.00080	0.501	1.223	40.66	27.23	24
25	0.0179	0.000252	320	0.00072	0.397	0.970	51.27	34.34	25
26	0.0159	0.000200	254	0.00064	0.315	0.769	64.64	43.30	26
27	0.0142	0.000158	202	0.00057	0.250	0.610	81.51	54.60	27
28	0.0126	0.000126	160	0.00051	0.198	0.484	102.8	68.86	28
29	0.0113	0.000100	127	0.00045	0.157	0.384	129.6	86.82	29
30	0.0100	0.000079	101	0.00040	0.125	0.304	163.5	109.5	30
31	0.0089	0.000063	80	0.00036	0.099	0.241	206.1	138.1	31
32	0.0080	0.000050	63	0.00032	0.078	0.191	259.9	174.1	32
33	0.0071	0.000039	50	0.00028	0.062	0.152	327.7	219.5	33
34	0.0063	0.000031	40	0.00025	0.049	0.120	413.2	276.8	34
35	0.0056	0.000025	32	0.00022	0.039	0.095	521.0	349.0	35
36	0.0050	0.000020	25	0.00020	0.031	0.076	657.1	440.2	36
37	0.0045	0.000016	20	0.00018	0.025	0.060	828.4	554.9	37
38	0.0040	0.000012	16	0.00016	0.019	0.048	1,045	699.9	38

COPPERLITE™ COPPER-CLAD ALUMINUM 15% COPPER (US/IMPERIAL)



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