

## COPPER CLAD STEEL 40% CONDUCTIVITY

Torpedo Specialty Wire produces copper clad steel by high temperature roll forming and metallurgically bonding copper strips onto a steel core rod.

Copper clad steel combines the corrosion resistance of a copper surface and the strength and toughness of a steel core. The conductivity of the composite can be controlled from 24% to 80% IACS (International Annealed Copper Standard). AISI steel cores from 1006 to 1022 are standard. Other steels are available by quote.

40% copper clad steels have a nominal copper thickness of 15% of the composite diameter and are used in applications for CATV, telephones, telecommunications, electronics, utility ground wires, light bulbs, aircraft, and automobiles.

Size	Diameter	Cross Section		Weight	Copper Thickness	Resistance	Breaking Load Pounds		Size
AWG	Inches	Square Inches	Circular Mils	Pounds Per 1000 Feet	Inches (Nom.)	Ohms Per 1000 Feet	Type 1 Hard	Type 2 Hard	AWG
0	0.3249	0.08291	105560	296.49	0.024368	0.251			0
1	0.2893	0.06573	83694	235.05	0.021698	0.316			1
2	0.2576	0.05212	66358	186.38	0.019320	0.399			2
3	0.2294	0.04133	52624	147.80	0.017205	0.503	3467	4258	3
4	0.2043	0.03278	41738	117.22	0.015323	0.634	2750	3541	4
5	0.1819	0.02599	33088	92.94	0.013643	0.799	2260	2938	5
6	0.1620	0.02061	26244	73.70	0.012150	1.008	1865	2433	6
7	0.1443	0.01635	20822	58.47	0.010823	1.270	1540	2011	7
8	0.1285	0.01297	16512	46.38	0.009638	1.602	1256	1660	8
9	0.1144	0.01028	13087	36.76	0.008580	2.021	1040	1368	9
10	0.1019	0.00816	10384	29.18	0.007643	2.547	850	1130	10
11	0.0907	0.00646	8226	23.10	0.006803	3.215	700	892	11
12	0.0808	0.00513	6529	18.34	0.006060	4.052	575	750	12
13	0.0720	0.00407	5184	14.55	0.005400	5.103	390	490	13
14	0.0641	0.00323	4109	11.55	0.004808	6.438	310	400	14
15	0.0571	0.00256	3260	9.15	0.004283	8.113	240	317	15
16	0.0508	0.00203	2581	7.26	0.003810	10.250	190	251	16
17	0.0453	0.00161	2052	5.76	0.003397	12.890	150	200	17
18	0.0403	0.00128	1624	4.58	0.003023	16.287	120	158	18
19	0.0359	0.00101	1289	3.61	0.002693	20.524	96	126	19
20	0.0320	0.00080	1024	2.86	0.002400	25.831	76	100	20
21	0.0285	0.00064	812	2.29	0.002138	32.565	60	77	21
22	0.0253	0.00050	640	1.79	0.001897	41.324	48	61	22
23	0.0226	0.00040	511	1.43	0.001695	51.788	38	49	23
24	0.0201	0.00032	404	1.14	0.001508	65.472	30	38	24
25	0.0179	0.000252	320	0.90	0.001343	82.550	24	30	25
26	0.0159	0.000199	254	0.71	0.001193	104.090	19	24	26

**Specifications:**

ASTM B 227  
 ASTM B 452  
 ASTM B 910

**Standard Tolerances:**

Diameter + 1% , -1%

**Soft Annealed Tempers**

Nominal 50,000 psi tensile strength  
 10% minimum elongation