

Single Wire for Overhead Shield Wire (Ground Wire)

Product Description

Individual Aluminum-clad Steel wires for overhead shield wire.

Application

Commonly used for overhead shield wire in high corrosion areas such as industrial, seashore, and desert environments. Also used in formed wire applications such as dead-ends.

Specifications

ASTM B415 – Bare, hard-drawn, round, Aluminum-clad Steel wire composed of a steel core with a substantially uniform continuous aluminum covering thoroughly bonded to it.

Size/AWG	Diameter		Ultimate Tensile Strength		Minimum Breaking Strength		Weight		Resistance at 20°		Cross Section		
	inches	mm	ksi	kg/mm ²	lbs.	kg	lbs./1,000 ft.	kg/km	Ω/1,000 ft.	Ω/km	C mils	inches ²	mm ²
4	.2043	5.189	155	109.0	5,081	2,304.6	93.63	139.34	1.222	4.010	41,740	0.033	21.150
	.1880	4.775	160	112.5	4,441	2,014.6	79.29	118.00	1.443	4.735	35,340	0.028	17.910
5	.1819	4.620	165	116.0	4,290	1,945.9	74.25	110.50	1.541	5.056	33,090	0.026	16.770
	.1729	4.392	170	119.5	3,991	1,810.4	67.09	99.84	1.706	5.598	29,900	0.023	15.150
6	.1620	4.114	175	123.0	3,608	1,636.6	58.88	87.62	1.943	6.375	26,240	0.021	13.300
	.1549	3.934	180	126.6	3,392	1,538.8	53.84	80.13	2.126	6.974	24,000	0.019	12.160
7	.1443	3.665	185	130.1	3,025	1,372.1	46.69	69.48	2.450	8.038	20,820	0.016	10.550
	.1369	3.477	190	133.6	2,796	1,268.5	42.04	62.57	2.722	8.931	18,740	0.015	9.495
8	.1285	3.264	195	137.1	2,529	1,147.1	37.03	55.11	3.089	10.135	16,510	0.013	8.367
9	.1144	2.906	195	137.1	2,005	909.4	29.37	43.71	3.896	12.783	13,090	0.010	6.632
10	.1019	2.588	195	137.1	1,590	721.2	23.29	34.66	4.912	16.116	10,380	0.008	5.261
11	.0907	2.304	195	137.1	1,269	571.9	18.47	27.49	6.194	20.322	8,230	0.006	4.168
12	.0808	2.052	195	137.1	1,000	453.6	14.65	21.80	7.811	25.627	6,530	0.005	3.310

Coefficient of linear expansion: 0.000 0007 2/deg F (12.96 x 10⁻⁶/deg C)

Temperature coefficient of resistance: 0.0020/deg F (0.0036/deg C)

Modulus of elasticity: 23,500 ksi (16,520 kg/mm²)

Min. aluminum thickness: 10% of nominal wire radius

