



POWER KABEL INC.

Alumoweld Overhead Ground Wire

APPLICATIONS & FEATURES

Alumoweld wire and strand are used by power utilities, as well as formed wire and optical ground wire manufacturers. Alumoweld is suitable in corrosive environments, lowering maintenance and replacement costs. Alumoweld overhead ground wire has excellent corrosion resistance. Its strength and conductivity remain unchanged in any atmosphere where aluminum is satisfactory, especially those known to be corrosive from industrial or atmospheric conditions. This assurance against corrosion is obtained through the application of a thick covering of pure aluminum, which provides a substantial barrier of protective metal. The minimum cladding thickness of Alumoweld is 10% of the radius of the wire. The cladding has a continuous, strong metallic bond to the steel core that will not crack or flake.

INDUSTRY COMPLIANCES

ASTM B-416 Bare concentric-lay-stranded conductors made from bare, hard-drawn, round, aluminum-clad steel wires of 20.3 % conductivity for general use of electrical purposes.

ASTM M-415 Safety Requirements for Mains-Operated Electronic & Related Apparatu

CONSTRUCTION

Alumoweld also provides strength greater than or comparable to other overhead ground wires. For commonly used wire sizes, the tensile strength of the individual wire can approach 200,000 pounds per square inch. When used in a strand for overhead ground wire, this high strength permits greater span lengths, less sag, and heavier loads under storm loading conditions.

NUMBER & SIZE OF WIRES	NORMAL WIRE DIAMETER		NORMAL STRAND DIAMETER		BREAKING LOAD		WEIGHT		RESISTANCE	
	IN	MM	IN	MM	LB	KG	LB/1000FT	KG/KM	OHMS/1000 FT@68°F	OHMS/KM@20°C
Alumoweld Strand ASTM B-416										
37 No. 6	0.1620	4.115	1.130	28.70	120,200	54,500	2222.00	3307.0	0.05356	0.1757
37 No. 7	0.1443	3.665	1.010	25.70	100,700	45,690	1762.00	2623.0	0.06754	0.2216
37 No. 8	0.1285	3.264	0.899	22.80	84,200	38,190	1398.00	2080.0	0.08516	0.2794
37 No. 9	0.1144	2.906	0.801	20.30	66,770	30,290	1108.00	1649.0	0.10740	0.3523
37 No.10	0.1019	2.588	0.713	18.10	52,950	24,020	879.00	1308.0	0.13540	0.4443
19 No. 5	0.1819	4.620	0.910	23.10	73,350	33,270	1430.00	2129.0	0.08224	0.2698
19 No. 6	0.1620	4.115	0.810	20.60	61,700	27,990	1134.00	1688.0	0.10370	0.3402
19 No. 7	0.1443	3.665	0.721	18.30	51,730	23,460	899.50	1339.0	0.13080	0.4290
19 No. 8	0.1285	3.264	0.642	16.30	43,240	19,610	713.50	1062.0	0.16490	0.5409
19 No. 9	0.1144	2.906	0.572	14.50	34,290	15,550	565.80	842.0	0.20790	0.6821
19 No.10	0.1019	2.588	0.509	12.90	27,190	12,330	448.70	667.7	0.26220	0.8601
7 No. 5	0.1819	4.620	0.546	13.90	27,030	12,260	524.90	781.1	0.22640	0.7426
7 No. 6	0.1620	4.115	0.486	12.30	22,730	10,310	416.30	619.5	0.28030	0.9198
7 No. 7	0.1443	3.665	0.433	11.00	19,060	8,645	330.00	491.1	0.35350	1.1600
7 No. 8	0.1285	3.264	0.385	9.78	15,930	7,226	261.80	389.6	0.44580	1.4630
7 No. 9	0.1144	2.906	0.343	8.71	12,630	5,729	207.60	308.9	0.56210	1.8440
7 No.10	0.1019	2.588	0.306	7.77	10,020	4,545	164.70	245.1	0.70880	2.3250
7 No.11	0.0907	2.304	0.272	6.91	7,945	3,604	130.60	194.4	0.89380	2.9320
7 No.12	0.0808	2.052	0.242	6.15	6,301	2,858	103.60	154.2	1.12700	3.6970
3 No. 5	0.1819	4.620	0.392	9.96	12,230	5,547	224.50	334.1	0.51770	1.6990
3 No. 6	0.1620	4.115	0.349	8.86	10,280	4,663	178.10	265.0	0.65280	2.1420
3 No. 7	0.1443	3.665	0.311	7.90	8,621	3,910	141.20	210.1	0.82320	2.7010
3 No. 8	0.1285	3.264	0.277	7.04	7,206	3,269	112.00	166.7	1.03800	3.4060
3 No. 9	0.1144	2.906	0.247	6.27	5,715	2,592	88.81	132.2	1.30900	4.2940
3 No.10	0.1019	2.588	0.220	5.59	4,532	2,056	70.43	104.8	1.65100	5.4150
Alumoweld Wire ASTM B-415										
No. 4	0.2043	5.189	155	1070	5,081	2,305	93.63	139.3	1.222	4.009
No. 5	0.1819	4.620	165	1140	4,290	1,946	74.25	110.5	1.541	5.056
No. 6	0.1620	4.115	175	1210	3,608	1,637	58.88	87.6	1.943	6.375
No. 7	0.1443	3.665	185	1280	3,025	1,372	46.69	69.5	2.450	8.038
No. 8	0.1285	3.264	195	1340	2,529	1,147	37.03	55.1	3.089	10.130
No. 9	0.1144	2.906	195	1340	2,005	909	29.37	43.7	3.896	12.780
No.10	0.1019	2.588	195	1340	1,590	721	23.29	34.7	4.912	16.120
No.11	0.0907	2.304	195	1340	1,261	572	18.47	27.5	6.194	20.320
No.12	0.0808	2.052	195	1340	1,000	454	14.65	21.8	7.811	25.630