

Alumoweld® Wire and Strand Physical and Electrical Characteristics

ALUMOWELD STRAND ASTM B-416												
NUMBER & SIZE OF WIRES	NOMINAL WIRE DIAMETER		NOMINAL STRAND DIAMETER		BREAKING LOAD		WEIGHT		RESISTANCE		CROSS SECTION	
	AWG	IN	MM	IN	MM	LB	KG	LB/1000 FT	KG/KM	OHMS/1000 FT@68°F	OHMS/KM@20°C	SQ IN
37 No. 6	0.1620	4.115	1.130	28.80	120,200	54,500	2222.00	3307.0	0.05356	0.1757	0.76264	492.20
37 No. 7	0.1443	3.665	1.010	25.70	100,700	45,690	1762.00	2623.0	0.06754	0.2216	0.60509	390.30
37 No. 8	0.1285	3.264	0.899	22.90	84,200	38,190	1398.00	2080.0	0.08516	0.2794	0.47984	309.50
37 No. 9	0.1144	2.906	0.801	20.30	66,770	30,290	1108.00	1649.0	0.10740	0.3523	0.38032	245.50
37 No.10	0.1019	2.588	0.713	17.90	52,950	24,020	879.00	1308.0	0.13540	0.4443	0.30174	194.70
19 No. 5	0.1819	4.620	0.910	23.10	73,350	33,270	1430.00	2129.0	0.08224	0.2698	0.49438	318.70
19 No. 6	0.1620	4.115	0.810	20.60	61,700	27,990	1134.00	1688.0	0.10370	0.3402	0.39163	252.70
19 No. 7	0.1443	3.665	0.721	18.30	51,730	23,460	899.50	1339.0	0.13080	0.4290	0.31073	200.40
19 No. 8	0.1285	3.264	0.642	16.30	43,240	19,610	713.50	1062.0	0.16490	0.5409	0.24641	158.90
19 No. 9	0.1144	2.906	0.572	14.50	34,290	15,550	565.80	842.0	0.20790	0.6821	0.19530	126.10
19 No.10	0.1019	2.588	0.509	12.90	27,190	12,330	448.70	667.7	0.26220	0.8601	0.15495	99.96
7 No. 5	0.1819	4.620	0.546	13.90	27,030	12,260	524.90	781.1	0.22640	0.7426	0.18193	117.40
7 No. 6	0.1620	4.115	0.486	12.40	22,730	10,310	416.30	619.5	0.28030	0.9198	0.14435	93.10
7 No. 7	0.1443	3.665	0.433	11.00	19,060	8,645	330.00	491.1	0.35350	1.1600	0.11448	73.87
7 No. 8	0.1285	3.264	0.385	9.78	15,930	7,226	261.80	389.6	0.44580	1.4630	0.09077	58.56
7 No. 9	0.1144	2.906	0.343	8.71	12,630	5,729	207.60	308.9	0.56210	1.8440	0.07198	46.44
7 No.10	0.1019	2.588	0.306	7.76	10,020	4,545	164.70	245.1	0.70880	2.3250	0.05708	36.83
7 No.11	0.0907	2.304	0.272	6.91	7,945	3,604	130.60	194.4	0.89380	2.9320	0.04527	29.21
7 No.12	0.0808	2.052	0.242	6.16	6,301	2,858	103.60	154.2	1.12700	3.6970	0.03590	23.16
3 No. 5	0.1819	4.620	0.392	9.96	12,230	5,547	224.50	334.1	0.51770	1.6990	0.07796	50.32
3 No. 6	0.1620	4.115	0.349	8.87	10,280	4,663	178.10	265.0	0.65280	2.1420	0.06185	39.90
3 No. 7	0.1443	3.665	0.311	7.90	8,621	3,910	141.20	210.1	0.82320	2.7010	0.04905	31.65
3 No. 8	0.1285	3.264	0.277	7.03	7,206	3,269	112.00	166.7	1.03800	3.4060	0.03890	25.10
3 No. 9	0.1144	2.906	0.247	6.26	5,715	2,592	88.81	132.2	1.30900	4.2940	0.03085	19.90
3 No.10	0.1019	2.588	0.220	5.58	4,532	2,056	70.43	104.8	1.65100	5.4150	0.02446	15.78

ALUMOWELD STRAND ASTM B-415												
NO.	IN	MM	IN	MM	LB	KG	LB/1000 FT	KG/KM	OHMS/1000 FT@68°F	OHMS/KM@20°C	SQ IN	MM2
No. 4	0.2043	5.189	115	109.0	5,081	2,305	93.63	139.3	1.222	4.009	0.03278	21.15
No. 5	0.1819	4.620	165	116.0	4,290	1,946	74.25	110.5	1.541	5.056	0.02599	16.77
No. 6	0.1620	4.115	175	123.0	3,608	1,637	58.88	87.6	1.943	6.375	0.02062	13.30
No. 7	0.1443	3.665	185	130.1	3,025	1,372	46.69	69.5	2.450	8.038	0.01635	10.55
No. 8	0.1285	3.264	195	137.1	2,529	1,147	37.03	55.1	3.089	10.130	0.01297	8.37
No. 9	0.1144	2.906	195	137.1	2,005	909	29.37	43.7	3.896	12.780	0.01028	6.63
No.10	0.1019	2.588	195	137.1	1,590	721	23.29	34.7	4.912	16.120	0.00816	5.26
No.11	0.0907	2.304	195	137.1	1,261	572	18.47	27.5	6.194	20.320	0.00647	4.17
No.12	0.0808	2.052	195	137.1	1,000	454	14.65	21.8	7.811	25.630	0.00513	3.31

Modulus of Elasticity: Strand 23,000,000; Solid Wire 23,500,000. Coefficient of Linear Expansion: 0.000,007,2 per degree F.
 Modulus of Elasticity: Strand 16,200 kg/mm²; Solid Wire 16,500 kg/mm². Coefficient of Linear Expansion: 0.000,013 per degree C.

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