

AAC - All Aluminum Conductor



APPLICATION:

AAC – All Aluminum Conductor is for stranded 1350 aluminum conductors and is primarily used for overhead transmission and distribution services, where strength of standard ACSR cables is not required. Class AA for bare conductors used in overhead lines. Class A for conductors to be covered with weather-resistant materials and for bare conductors where greater flexibility is required.

STANDARDS:

- ASTM B-230 Aluminum 1350-H19 for Electrical Purposes
- ASTM B-231 Concentric-Lay-Stranded Aluminum 1350 conductors
- Requirements of the National Electrical Code

CONDUCTORS:

- Concentric lay stranded conductor consisting of Aluminum Alloy 1350-H19 wires. AAC is available in both single layer and multi-layer constructions.

Code Word	Conductor Size	Stranding		Diameter		Cross Sectional Area	Weight	Rated Breaking Strength	Resistance**		Ampacity*
		# of Wires	Class	Indiv. Wire	Comp. Cable				DC @ 20°C	AC @ 75°C	
	AWG/kcmil			inches	inches	Sq. In.	lbs/kft	lbs	Ohms/kft	Ohms/kft	amps
Peachbell	6	7	A	0.0612	0.184	0.0206	24.6	563	0.658	0.8050	103
Rose	4	7	A	0.0772	0.232	0.0328	39.2	881	0.414	0.5060	138
Iris	2	7	AA,A	0.0974	0.292	0.0522	62.3	1,350	0.260	0.3180	185
Pansy	1	7	AA,A	0.1093	0.328	0.0657	78.5	1,640	0.207	0.2520	214
Poppy	1/0	7	AA,A	0.1228	0.368	0.0829	99.1	1,990	0.164	0.2000	247
Aster	2/0	7	AA,A	0.1379	0.414	0.1045	124.9	2,510	0.130	0.1590	286
Phlox	3/0	7	AA,A	0.1548	0.464	0.1318	157.5	3,040	0.103	0.1260	331
Oxlip	4/0	7	AA,A	0.1739	0.522	0.1663	198.6	3,830	0.082	0.0999	383
Sneezewart	250	7	AA	0.1890	0.567	0.1964	234.7	4,520	0.069	0.0846	425
Valerian	250	19	A	0.1147	0.574	0.1964	234.7	4,660	0.069	0.0846	425
Daisy	266.8	7	AA	0.1953	0.586	0.2095	250.5	4,830	0.065	0.0793	443
Laurel	266.8	19	A	0.1185	0.593	0.2095	250.5	4,970	0.065	0.0793	444
Peony	300	19	A	0.1257	0.629	0.2358	281.4	5,480	0.058	0.0706	478
Tulip	336.4	19	A	0.1331	0.666	0.2644	315.8	6,150	0.051	0.0630	513
Daffodil	350	19	A	0.1357	0.679	0.2749	328.6	6,390	0.049	0.0605	526
Canna	397.5	19	AA,A	0.1447	0.724	0.3122	373.2	7,110	0.044	0.0534	570
Goldentuft	450	19	AA	0.1539	0.769	0.3534	422.4	7,890	0.038	0.0472	616
Cosmos	477	19	AA	0.1584	0.793	0.3746	447.8	8,360	0.036	0.0445	639
Syringa	477	37	A	0.1135	0.795	0.3746	447.8	8,690	0.036	0.0445	639
Zinnia	500	19	AA	0.1622	0.811	0.3927	469.4	8,760	0.035	0.0425	658
Hyacinth	500	37	A	0.1162	0.813	0.3924	469.4	9,110	0.035	0.0425	658
Dahlia	556.5	19	AA	0.1711	0.856	0.4371	522.4	9,750	0.031	0.0382	703
Mistletoe	556.5	37	A	0.1226	0.858	0.4371	522.4	9,940	0.031	0.0382	704

All values are nominal and subject to correction.

* Current ratings are based on 75°C conductor temperature, 25°C ambient, 2ft/s wind, in sun, .05 coefficients of emissivity and absorption.

** Resistance is calculated using ASTM standard increments of stranding and metal conductivity of 61.2% IACS, AC resistance at 60 Hz.

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		# of Wires	Class	Indiv. Wire	Comp. Cable				DC @ 20°C	AC @ 75°C	
	AWG/kcmil			inches	inches	Sq. In.	lbs/kft	lbs	Ohms/kft	Ohms/kft	amps
Meadowsweet	600	37	AA,A	0.1273	0.891	0.4712	563.2	10,700	0.029	0.0355	738
Orchid	636	37	AA,A	0.1311	0.918	0.4995	597.0	11,400	0.027	0.0335	765
Heuchera	650	37	AA	0.1326	0.928	0.5105	610.2	11,600	0.027	0.0328	775
Verbena	700	37	AA	0.1375	0.963	0.5498	657.1	12,500	0.025	0.0305	812
Flag	700	61	A	0.1071	0.964	0.5498	657.1	12,900	0.025	0.0305	812
Violet	715.5	37	AA	0.1391	0.974	0.5623	671.7	12,800	0.024	0.0299	823
Nasturtium	715.5	61	A	0.1083	0.975	0.5619	671.7	13,100	0.024	0.0299	823
Petunia	750	37	AA	0.1424	0.997	0.5893	704.5	13,100	0.023	0.0286	847
Cattail	750	61	A	0.1109	0.998	0.5892	704.0	13,500	0.023	0.0286	847
Arbutus	795	37	AA	0.1466	1.026	0.6245	746.3	13,900	0.022	0.0271	878
Lilac	795	61	A	0.1142	1.028	0.6248	746.3	14,300	0.022	0.0270	879
Cockscomb	900	37	AA	0.1560	1.092	0.7072	844.9	15,400	0.019	0.0239	948
Snapdragon	900	61	A	0.1215	1.094	0.7073	844.9	15,900	0.019	0.0239	948
Magnolia	954	37	AA	0.1606	1.124	0.7495	895.6	16,400	0.018	0.0226	982
Goldenrod	954	61	A	0.1251	1.126	0.7498	895.6	16,900	0.018	0.0226	983
Hawkweed	1000	37	AA	0.1644	1.151	0.7854	938.7	17,200	0.017	0.0216	1010
Camellia	1000	61	A	0.1280	1.152	0.7849	938.7	17,700	0.017	0.0216	1011
Bluebell	1033.5	37	AA	0.1671	1.170	0.8114	970.2	17,700	0.017	0.0210	1031
Larkspur	1033.5	61	A	0.1302	1.172	0.8122	970.2	18,300	0.017	0.0210	1032
Marigold	1113	61	AA,A	0.1351	1.216	0.8744	1045.0	19,700	0.016	0.0195	1079
Hawthorn	1192.5	61	AA,A	0.1398	1.258	0.9366	1119.0	21,100	0.015	0.0183	1124
Narcissus	1272	61	AA,A	0.1444	1.300	0.9990	1194.0	22,000	0.014	0.0173	1169
Columbine	1351.5	61	AA,A	0.1489	1.340	1.0610	1269.0	23,400	0.013	0.0163	1212
Carnation	1431	61	AA,A	0.1532	1.379	1.1244	1343.0	24,300	0.012	0.0155	1253
Gladiolus	1510.5	61	AA,A	0.1574	1.417	1.1869	1418.0	25,600	0.014	0.0147	1294
Coreopsis	1590	61	AA	0.1614	1.454	1.2490	1493.0	27,000	0.011	0.0141	1333
Jessamine	1750	61	AA	0.1694	1.525	1.3748	1643.0	29,700	0.010	0.0129	1408
Cowslip	2000	91	A	0.1482	1.630	1.5710	1877.0	34,200	0.009	0.0115	1518
Sagebrush	2250	91	A	0.1572	1.729	1.7670	2131.0	37,500	0.008	0.0105	1612
Lupine	2500	91	A	0.1657	1.823	1.9640	2370.0	41,900	0.007	0.0097	1706
Bitterroot	2750	91	A	0.1739	1.913	2.1600	2607.0	46,100	0.006	0.0090	1793
Trillium	3000	127	A	0.1537	1.998	2.3564	2844.0	50,300	0.006	0.0083	1874
Bluebonnet	3500	127	A	0.1660	2.158	2.7490	3350.0	58,700	0.005	0.0076	2024

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