

AAC All Aluminum Conductor



A Viakable Company

CME Wire and Cable offers AAC concentric-lay-stranded conductors in single and multi-layer conductor designs to maximize the current carrying capacity for transmission and distribution projects that do not require the strength of ACSR type conductors.

Construction

AAC, a homogenous conductor, is concentric-lay-stranded conductor made from round aluminum 1350-H19 (extra hard) wires. AAC conductors are available in both single and multi-layer constructions to meet the current carrying capacity of the application.

Specifications

AAC conductors are manufactured in accordance with the ASTM specifications B230 and B231.

Features

The homogeneous construction of AAC conductors makes them a preferred choice for applications that do not require the strength of ACSR conductors and need to utilize the higher current carrying

capacity for overhead power transmission and distribution projects AAC conductors are also a good choice for coastal areas, where the environmental conditions are corrosive to ACSR conductors.



ALUMINUM CONDUCTOR

Technical Data

AAC

Code Word	Size AWG or kcmil	Cross Sectional Area in ²	Class	Stranding		Physical Properties			Electrical Properties					
				Number	Diameter in	Nominal Conductor Diameter in	Rated Strength lb	Nominal Mass lb/kft	Resistance			Reactance		
									dc 20 °C Ω/kft	ac 25 °C Ω/kft	ac 75 °C Ω/kft	Capacitive MΩ/kft	Inductive Ω/kft	GMR ft
Peachbell	6	0.0206	A	7	0.0612	0.184	563	24.6	0.6593	0.6725	0.8059	0.7660	0.1193	0.00555
Rose	4	0.0328	A	7	0.0772	0.232	881	39.1	0.4144	0.4227	0.5064	0.7296	0.1140	0.00700
Iris	2	0.0522	AA,A	7	0.0974	0.292	1350	62.2	0.2602	0.2655	0.3182	0.6929	0.1087	0.00883
Pansy	1	0.0657	AA,A	7	0.1093	0.328	1640	78.4	0.2066	0.2110	0.2527	0.6716	0.1061	0.00991
Poppy	1/0	0.0829	AA,A	7	0.1228	0.368	1990	98.9	0.1638	0.1671	0.2002	0.6550	0.1034	0.01110
Aster	2/0	0.1045	AA,A	7	0.1379	0.414	2510	124.8	0.1299	0.1326	0.1587	0.6346	0.1008	0.01250
Phlox	3/0	0.1317	AA,A	7	0.1548	0.464	3040	157.2	0.1031	0.1053	0.1259	0.6188	0.0981	0.01400
Oxlip	4/0	0.1662	AA,A	7	0.1739	0.522	3830	198.4	0.0817	0.0835	0.1000	0.6029	0.0955	0.01580
Sneezewort	250.0	0.1964	AA	7	0.1890	0.567	4520	234.4	0.0691	0.0706	0.0847	0.5860	0.0934	0.01710
Valerian	250.0	0.1963	A	19	0.1147	0.574	4660	234.3	0.0691	0.0706	0.0847	0.5860	0.0922	0.01810
Daisy	266.8	0.2095	AA	7	0.1952	0.586	4830	250.2	0.0648	0.0663	0.0794	0.5810	0.0926	0.01770
Laurel	266.8	0.2095	A	19	0.1185	0.593	4970	250.1	0.0648	0.0663	0.0794	0.5810	0.0915	0.01870
Peony	300.0	0.2358	A	19	0.1257	0.629	5480	281.4	0.0575	0.0589	0.0705	0.5700	0.0902	0.01980
Tulip	336.4	0.2644	A	19	0.1331	0.666	6150	315.5	0.0513	0.0527	0.0629	0.5600	0.0888	0.02100
Daffodil	350.0	0.2748	A	19	0.1357	0.679	6390	327.9	0.0494	0.0506	0.0606	0.5600	0.0883	0.02140
Canna	397.5	0.3124	AA,A	19	0.1447	0.724	7110	372.9	0.0435	0.0445	0.0534	0.5490	0.0869	0.02280
Goldentuft	450.0	0.3534	AA	19	0.1539	0.769	7890	421.8	0.0384	0.0394	0.0472	0.5390	0.0854	0.02430
Cosmos	477.0	0.3744	AA	19	0.1584	0.792	8360	446.8	0.0363	0.0373	0.0445	0.5330	0.0848	0.02500
Syringa	477.0	0.3744	A	37	0.1135	0.795	8690	446.8	0.0363	0.0373	0.0445	0.5330	0.0845	0.02540
Zinnia	500.0	0.3926	AA	19	0.1622	0.811	8760	468.5	0.0346	0.0356	0.0426	0.5310	0.0843	0.02560

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product. Other sizes available upon request. Direct current resistance is based on 16.946 Ω·cmil/ft at 20 °C, 61.2% IACS with stranding increments as per ASTM B231.

Technical Data *continued*

AAC

Code Word	Size AWG or kcmil	Cross Sectional Area (in ²)	Class	Stranding		Physical Properties			Electrical Properties					
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									dc 20 °C Ω/kft	ac 25 °C Ω/kft	ac 75 °C Ω/kft	Capacitive MΩ/kft	Inductive Ω/kft	GMR ft
Dahlia	556.5	0.4369	AA	19	0.1711	0.856	9750	521.4	0.0311	0.0320	0.0383	0.522	0.0830	0.0270
Mistletoe	556.5	0.4368	A	37	0.1226	0.858	9940	521.3	0.0311	0.0320	0.0383	0.522	0.0826	0.0275
Meadowsweet	600.0	0.4709	AA,A	37	0.1273	0.891	10700	562.0	0.0288	0.0297	0.0356	0.516	0.0818	0.0285
Orchid	636.0	0.4995	AA,A	37	0.1311	0.918	11400	596.0	0.0272	0.0282	0.0335	0.511	0.0811	0.0294
Heuchera	650.0	0.5102	AA	37	0.1325	0.928	11600	609.8	0.0266	0.0275	0.0324	0.510	0.0808	0.0297
Verbena	700.0	0.5494	AA	37	0.1375	0.963	12500	655.7	0.0247	0.0256	0.0305	0.504	0.0799	0.0308
Violet	715.5	0.5623	AA	37	0.1391	0.974	12800	671.0	0.0242	0.0252	0.0299	0.502	0.0797	0.0312
Nasturtium	715.5	0.5619	A	61	0.1083	0.975	13100	671.0	0.0242	0.0252	0.0299	0.502	0.0795	0.0314
Petunia	750.0	0.5893	AA	37	0.1424	0.997	13100	703.2	0.0230	0.0251	0.0286	0.498	0.0792	0.0319
Arbutus	795.0	0.6245	AA	37	0.1466	1.026	13900	745.3	0.0217	0.0227	0.0269	0.494	0.0780	0.0328
Lilac	795.0	0.6248	A	61	0.1142	1.028	14300	745.7	0.0217	0.0227	0.0269	0.494	0.0784	0.0331
Cockscomb	900.0	0.7072	AA	37	0.1560	1.092	16400	844.0	0.0192	0.0201	0.0239	0.484	0.0771	0.0349
Magnolia	954.0	0.7495	AA	37	0.1606	1.124	16400	894.5	0.0181	0.0191	0.0227	0.479	0.0763	0.0360
Goldenrod	954.0	0.7498	A	61	0.1251	1.126	16900	894.8	0.0181	0.0191	0.0227	0.479	0.0763	0.0362
Hawkweed	1000.0	0.7854	AA	37	0.1644	1.151	17200	937.3	0.0173	0.0182	0.0216	0.476	0.0759	0.0368
Bluebell	1033.5	0.8114	AA	37	0.1671	1.170	17700	968.4	0.0167	0.0177	0.0210	0.473	0.0756	0.0374
Larkspur	1033.5	0.8122	A	61	0.1302	1.172	18300	969.2	0.0167	0.0177	0.0210	0.473	0.0754	0.0377
Marigold	1113.0	0.8744	AA,A	61	0.1351	1.216	19700	1044.0	0.0155	0.0165	0.0195	0.467	0.0744	0.0391
Hawthorn	1192.5	0.9363	AA,A	61	0.1398	1.258	21100	1117.0	0.0145	0.0155	0.0183	0.462	0.0737	0.0405
Narcissus	1272.0	0.9990	AA,A	61	0.1444	1.300	22000	1192.0	0.0136	0.0146	0.0173	0.457	0.0729	0.0418
Columbine	1351.5	1.0610	AA,A	61	0.1488	1.340	23400	1266.0	0.0128	0.0138	0.0163	0.452	0.0722	0.0431
Carnation	1431.0	1.1240	AA,A	61	0.1532	1.379	24300	1342.0	0.0121	0.0132	0.0155	0.447	0.0715	0.0444
Coreopsis	1590.0	1.2480	AA	61	0.1614	1.454	27000	1489.0	0.0109	0.0120	0.0141	0.439	0.0705	0.0468
Jessamine	1750.0	1.3750	AA	61	0.1694	1.525	29700	1641.0	0.0099	0.0111	0.0129	0.432	0.0693	0.0490
Cowslip	2000.0	1.5700	A	91	0.1482	1.630	34200	1873.0	0.0087	0.0099	0.0115	0.421	0.0677	0.0525
Sagebrush	2250.0	1.7660	A	91	0.1572	1.729	37700	2128.0	0.0078	0.0091	0.0105	0.412	0.0664	0.0557
Lupine*	2500.0	1.9620	A	91	0.1657	1.823	41900	2365.0	0.0070	0.0084	0.0097	0.404	0.0652	0.0588

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product. Other sizes available upon request.

Direct current resistance is based on 16.946 Ω·cmil/ft at 20 °C, 61.2% IACS with stranding increments as per ASTM B231.

* Contact CME to review availability.