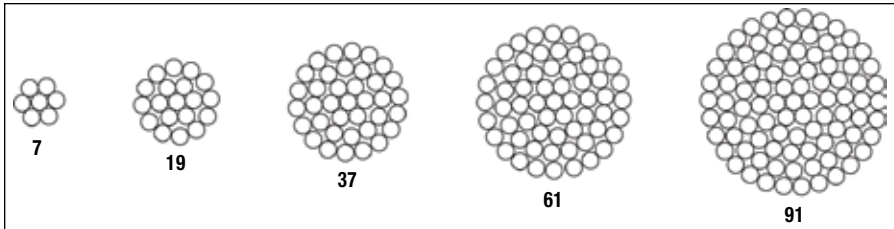


TransPowr® AAC Bare Overhead Conductor

All-Aluminum 1350 Conductor Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

Bare all-aluminum 1350 conductors (AAC) are concentric-lay-stranded conductors, consisting of one or more layers of wire wrapped helically around a straight round central wire. Each successive layer has six wires more than the layer immediately beneath. Greater flexibility is provided by increasing the number of strands for a specific cross-sectional area. AAC conductors are manufactured in accordance with the requirements of the latest issue of ASTM B231. The more commonly used strandings are 7, 19, 37, 61 and 91. The sizes and strandings listed on the following pages are common examples in overhead lines. Other sizes are also available.

Complete Conductor (cont'd.):

Class AA strandings are used for bare overhead lines. The direction of lay for the outer layer is right-hand and is normally reversed in successive layers. The temper is full hard drawn (H19).

Class A strandings are used primarily for overhead conductors which are to be covered with weather-resistant materials. Greater flexibility than Class AA is provided. The outer layer is right-hand, and the temper generally H19. Successive layers are normally reverse lay.

Features and Benefits:

Optimum economy is provided since the lighter weight means lower unit length costs, easier handling in installation and less-complex fittings.

All-aluminum conductors have an inherent high corrosion resistance due to their homogeneous construction.

Applications:

Stranded bare all-aluminum 1350 conductors (AAC) are used in overhead line installations where design parameters do not require the higher strength or temperature ratings provided by ACSR, ACSS or other type conductors.

Options:

- E3X® surface coating (/E3X)
- Compact aluminum strands (ASTM B400)
- Trapezoidal-shaped aluminum strands (/TW)
- High-conductivity aluminum (/HC) (62.2% IACS)
- Non-specular surface finish (/NS)

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.

TransPowr® AAC Bare Overhead Conductor

All-Aluminum 1350 Conductor Concentric-Lay-Stranded

AAC, ALUMINUM 1350 CONDUCTORS - CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES	CLASS	CROSS-SECTION SQ. INCHES	O.D. IN	APPROX. WEIGHT LB/KFT	RATED STRENGTH LBS
Peachbell	#6	7x0.0612	A	0.0206	0.184	24.4	560
Rose	#4	7x0.0772	A	0.0328	0.232	38.8	880
Iris	#2	7x0.0974	A, AA	0.0522	0.292	61.8	1350
Pansy	#1	7x0.1093	A, AA	0.0657	0.328	77.8	1640
Poppy	1/0	7x0.1228	A, AA	0.0829	0.368	98.3	1990
Aster	2/0	7x0.1379	A, AA	0.1045	0.414	123.9	2510
Phlox	3/0	7x0.1548	A, AA	0.1317	0.464	156.1	3040
Oxlip	4/0	7x0.1739	A, AA	0.1663	0.522	197.0	3830
Daisy	266.8	7x0.1952	AA	0.2095	0.586	248.3	4830
Laurel	266.8	19x0.1185	A	0.2095	0.592	249.4	4970
Tulip	336.4	19x0.1331	A	0.2644	0.666	314.6	6150
Daffodil	350.0	19x0.1357	A	0.2748	0.678	327.1	6390
Canna	397.5	19x0.1446	A, AA	0.3120	0.723	371.4	7110
Cosmos	477.0	19x0.1584	AA	0.3744	0.792	445.6	8360
Syringa	477.0	37x0.1135	A	0.3744	0.794	447.0	8690
Zinnia	500.0	19x0.1622	AA	0.3926	0.811	467.3	8760
Hyacinth	500.0	37x0.1162	A	0.3924	0.813	468.6	9110
Dahlia	556.5	19x0.1711	AA	0.4369	0.856	520.0	9750
Mistletoe	556.5	37x0.1226	A	0.4368	0.858	521.6	9940
Meadowsweet	600.0	37x0.1273	A, AA	0.4709	0.891	562.4	10700
Orchid	636.0	37x0.1311	A, AA	0.4995	0.918	596.4	11400
Violet	715.5	37x0.1391	AA	0.5623	0.974	671.4	12800
Nasturtium	715.5	61x0.1083	A	0.5619	0.975	673.9	13100
Petunia	750.0	37x0.1424	AA	0.5893	0.997	703.7	13100
Arbutus	795.0	37x0.1466	AA	0.6245	1.026	745.8	13900
Lilac	795.0	61x0.1142	A	0.6248	1.028	749.3	14300
Fuchsia	800.0	37x0.1470	AA	0.6280	1.029	749.9	14000
Heliotrope	800.0	61x0.1145	A	0.6281	1.031	753.3	14400
Anemone	874.5	37x0.1537	AA	0.6865	1.076	819.8	15000
Crocus	874.5	61x0.1197	A	0.6864	1.077	823.2	15800
Magnolia	954.0	37x0.1606	AA	0.7495	1.124	895.0	16400
Goldenrod	954.0	61x0.1251	A	0.7498	1.126	899.2	16900
Camellia	1000.0	61x0.1280	A	0.7849	1.152	941.3	17700
Bluebell	1033.5	37x0.1671	AA	0.8114	1.170	969.0	17700
Larkspur	1033.5	61x0.1302	A	0.8122	1.172	974.0	18300
Marigold	1113.0	61x0.1351	A, AA	0.8744	1.216	1049	19700
Hawthorn	1192.5	61x0.1398	A, AA	0.9363	1.258	1123	21100
Narcissus	1272.0	61x0.1444	A, AA	0.9990	1.300	1198	22000
Columbine	1351.5	61x0.1488	A, AA	1.061	1.339	1272	23400
Carnation	1431.0	61x0.1532	A, AA	1.124	1.379	1348	24300
Gladiolus	1510.5	61x0.1574	A, AA	1.187	1.417	1423	25600
Coreopsis	1590.0	61x0.1614	AA	1.248	1.453	1497	27000
Jessamine	1750.0	61x0.1694	AA	1.375	1.525	1649	29700
Cowslip	2000.0	91x0.1482	A	1.570	1.630	1883	34200
Sagebrush	2250.0	91x0.1572	A	1.766	1.729	2126	37700
Pigweed	2300.0	61x0.1942	A	1.807	1.748	2167	39000
Lupine	2500.0	91x0.1657	A	1.962	1.823	2362	41900
Bitterroot	2750.0	91x0.1738	A	2.159	1.912	2598	46100
Trillium	3000.0	127x0.1537	A	2.356	1.998	2843	50300
Bluebonnet	3500.0	127x0.1660	A	2.749	2.158	3316	58700

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPwr[®] AAC Bare Overhead Conductor

All-Aluminum 1350 Conductor Concentric-Lay-Stranded

AAC, ALUMINUM 1350 CONDUCTORS - CONCENTRIC-LAY-STRANDED (ELECTRICAL PROPERTIES)

CODE WORD	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES	CLASS	CROSS-SECTION SQ. INCHES	O.D. IN	RESISTANCE (1) OHMS/KFT			AMPACITY @75°C (2)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (3)	CAPACITIVE REACTANCE MEGAOHM/KFT (3)
						DC @20°C	AC @25°C	AC @75°C	STANDARD	E3X [®]			
Peachbell	#6	7x0.0612	A	0.0206	0.184	0.654	0.667	0.800	105	110	0.0056	0.119	0.7633
Rose	#4	7x0.0772	A	0.0328	0.232	0.411	0.420	0.503	140	150	0.0070	0.114	0.7269
Iris	#2	7x0.0974	A, AA	0.0522	0.292	0.259	0.264	0.316	185	200	0.0088	0.109	0.6905
Pansy	#1	7x0.1093	A, AA	0.0657	0.328	0.205	0.209	0.251	215	230	0.0099	0.106	0.6725
Poppy	1/0	7x0.1228	A, AA	0.0829	0.368	0.163	0.166	0.199	250	270	0.0111	0.103	0.6542
Aster	2/0	7x0.1379	A, AA	0.1045	0.414	0.129	0.132	0.158	285	315	0.0125	0.101	0.6361
Phlox	3/0	7x0.1548	A, AA	0.1317	0.464	0.102	0.104	0.125	330	365	0.0140	0.0981	0.6180
Oxlip	4/0	7x0.1739	A, AA	0.1663	0.522	0.0811	0.0828	0.0992	385	425	0.0158	0.0953	0.5997
Daisy	266.8	7x0.1952	AA	0.2095	0.586	0.0643	0.0657	0.0787	445	495	0.0177	0.0927	0.5816
Laurel	266.8	19x0.1185	A	0.2095	0.592	0.0646	0.0661	0.0791	445	495	0.0187	0.0914	0.5798
Tulip	336.4	19x0.1331	A	0.2644	0.666	0.0512	0.0525	0.0628	515	575	0.0210	0.0888	0.5616
Daffodil	350.0	19x0.1357	A	0.2748	0.678	0.0493	0.0504	0.0603	525	590	0.0214	0.0883	0.5586
Canna	397.5	19x0.1446	A, AA	0.3120	0.723	0.0434	0.0444	0.0532	570	640	0.0228	0.0869	0.5486
Cosmos	477.0	19x0.1584	AA	0.3744	0.792	0.0361	0.0371	0.0444	640	720	0.0250	0.0848	0.5343
Syringa	477.0	37x0.1135	A	0.3744	0.794	0.0363	0.0373	0.0445	640	720	0.0254	0.0844	0.5338
Zinnia	500.0	19x0.1622	AA	0.3926	0.811	0.0345	0.0354	0.0423	660	745	0.0256	0.0842	0.5306
Hyacinth	500.0	37x0.1162	A	0.3924	0.813	0.0346	0.0356	0.0425	660	740	0.0260	0.0839	0.5302
Dahlia	556.5	19x0.1711	AA	0.4369	0.856	0.0310	0.0319	0.0381	705	795	0.0270	0.0830	0.5223
Mistletoe	556.5	37x0.1226	A	0.4368	0.858	0.0311	0.0320	0.0382	705	795	0.0275	0.0826	0.5218
Meadowsweet	600.0	37x0.1273	A, AA	0.4709	0.891	0.0288	0.0297	0.0355	735	835	0.0285	0.0818	0.5159
Orchid	636.0	37x0.1311	A, AA	0.4995	0.918	0.0272	0.0281	0.0335	765	865	0.0294	0.0810	0.5113
Violet	715.5	37x0.1391	AA	0.5623	0.974	0.0242	0.0251	0.0299	825	935	0.0311	0.0798	0.5020
Nasturtium	715.5	61x0.1083	A	0.5619	0.975	0.0243	0.0252	0.0300	820	935	0.0314	0.0795	0.5018
Petunia	750.0	37x0.1424	AA	0.5893	0.997	0.0231	0.0239	0.0285	845	965	0.0319	0.0792	0.4983
Arbutus	795.0	37x0.1466	AA	0.6245	1.026	0.0218	0.0226	0.0270	880	1000	0.0328	0.0785	0.4938
Lilac	795.0	61x0.1142	A	0.6248	1.028	0.0218	0.0227	0.0271	875	1000	0.0331	0.0783	0.4935
Fuchsia	800.0	37x0.1470	AA	0.6280	1.029	0.0216	0.0225	0.0268	880	1005	0.0329	0.0785	0.4933
Heliotrope	800.0	61x0.1145	A	0.6281	1.031	0.0217	0.0226	0.0269	880	1005	0.0332	0.0783	0.4931
Anemone	874.5	37x0.1537	AA	0.6865	1.076	0.0198	0.0207	0.0246	930	1065	0.0344	0.0774	0.4864
Crocus	874.5	61x0.1197	A	0.6864	1.077	0.0199	0.0208	0.0247	930	1065	0.0347	0.0772	0.4861
Magnolia	954.0	37x0.1606	AA	0.7495	1.124	0.0181	0.0190	0.0226	980	1125	0.0360	0.0764	0.4795
Goldenrod	954.0	61x0.1251	A	0.7498	1.126	0.0182	0.0191	0.0227	980	1125	0.0362	0.0763	0.4792
Camellia	1000.0	61x0.1280	A	0.7849	1.152	0.0174	0.0183	0.0217	1010	1160	0.0371	0.0757	0.4756
Bluebell	1033.5	37x0.1671	AA	0.8114	1.170	0.0167	0.0176	0.0209	1030	1185	0.0374	0.0755	0.4733
Larkspur	1033.5	61x0.1302	A	0.8122	1.172	0.0168	0.0177	0.0210	1030	1185	0.0377	0.0753	0.4730
Marigold	1113.0	61x0.1351	A, AA	0.8744	1.216	0.0156	0.0165	0.0196	1075	1240	0.0391	0.0745	0.4672
Hawthorn	1192.5	61x0.1398	A, AA	0.9363	1.258	0.0146	0.0155	0.0184	1120	1295	0.0405	0.0737	0.4618
Narcissus	1272.0	61x0.1444	A, AA	0.9990	1.300	0.0137	0.0146	0.0173	1165	1350	0.0418	0.0730	0.4568
Columbine	1351.5	61x0.1488	A, AA	1.061	1.339	0.0129	0.0139	0.0163	1210	1400	0.0431	0.0723	0.4521
Carnation	1431.0	61x0.1532	A, AA	1.124	1.379	0.0121	0.0132	0.0155	1250	1455	0.0444	0.0716	0.4475
Gladiolus	1510.5	61x0.1574	A, AA	1.187	1.417	0.0115	0.0126	0.0148	1290	1505	0.0456	0.0710	0.4433
Coreopsis	1590.0	61x0.1614	AA	1.248	1.453	0.0109	0.0120	0.0141	1330	1550	0.0467	0.0704	0.4393
Jessamine	1750.0	61x0.1694	AA	1.375	1.525	0.00993	0.0111	0.0129	1405	1645	0.0490	0.0693	0.4318
Cowslip	2000.0	91x0.1482	A	1.570	1.630	0.00869	0.00994	0.0115	1515	1780	0.0526	0.0677	0.4213
Sagebrush	2250.0	91x0.1572	A	1.766	1.729	0.00775	0.00908	0.0105	1615	1905	0.0558	0.0663	0.4120
Pigweed	2300.0	61x0.1942	A	1.807	1.748	0.00755	0.00888	0.0102	1640	1930	0.0562	0.0662	0.4103
Lupine	2500.0	91x0.1657	A	1.962	1.823	0.00697	0.00839	0.00963	1710	2020	0.0588	0.0651	0.4038
Bitterroot	2750.0	91x0.1738	A	2.159	1.912	0.00634	0.00783	0.00894	1795	2130	0.0617	0.0640	0.3963
Trillium	3000.0	127x0.1537	A	2.356	1.998	0.00582	0.00740	0.00841	1875	2230	0.0646	0.0630	0.3894
Bluebonnet	3500.0	127x0.1660	A	2.749	2.158	0.00499	0.00669	0.00753	2025	2420	0.0697	0.0612	0.3773

(1) Based on a conductivity of 61.2% (minimum lot average) IACS at 20°C. To convert to ohms/mile, multiply by 5.28. To convert of ohms/km, multiply by 3.281.

(2) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for an E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for an E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.

(3) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.

