

ASTM B549

Aluminium Conductor Aluminium Clad
Steel Reinforced(ACSR AW)



APPLICATIONS

Used as bare overhead transmission and as primary and secondary distribution cable. ACSR/AW offers strength characteristics similar to ACSR, along with slightly greater ampacity and resistance to corrosion due to aluminum-cladding of the steel core wires.

SPECIFICATIONS

ACSR/AW bare conductor meets or exceeds the following ASTM specifications:

- B230 Aluminum 1350-H19 Wire for Electrical Purposes.
- B502 Aluminum-Clad Steel Core Wire for Use in Overhead Electrical Aluminum Conductors.
- B549 Concentric-Lay Stranded Aluminum Conductors, Aluminum-Clad Steel Reinforced for Use in Overhead Electrical Conductors.

CONSTRUCTION

Aluminum 1350-H19 wires, concentrically stranded about an aluminum-clad steel core.

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Code Word	Size (AWG or kcmil)	Stranding (Al/Aw)	Diameter (ins.)				Weight Per 1000ft. (lbs)			Rated Strength (lbs.)	Resistance OHMS/1000ft.		Allowable Ampacity+ (Amps)
			Individual Wires		Aw Core	Comp. Cable	Al	Aw	Total		DC@ 20°C	AC@ 75°C	
			Al	Aw									
Swan/Aw	4	6/1	.0834	.0834	.0834	.25	39	16	55	1780	.3917	.4770	145
Swanate/Aw	4	7/1	.0772	.103	.103	.257	39	24	63	2280	.3814	.4642	148
Sparrow/Aw	2	6/1	.1052	.1052	.1052	.316	62	25	87	2760	.2462	.2997	194
Sparate/Aw	2	7/1	.0974	.1298	.1298	.325	62	38	100	3510	.2396	.2917	198
Robin/Aw	1	6/1	.1181	.1181	.1181	.354	78	31	109	3450	.1950	.2373	225
Raven/Aw	1/0	6/1	.1327	.1327	.1327	.398	99	39	138	4250	.1547	.1884	260
Quail/Aw	2/0	6/1	.1489	.1489	.1489	.447	124	50	174	5130	.1227	.1494	301
Pigeon/Aw	3/0	6/1	.1672	.1672	.1672	.502	156	63	219	6300	.09747	.1188	347
Penguin/Aw	4/0	6/1	.1878	.1878	.1878	.563	197	79	277	7690	.07726	.09422	402
Waxwing/Aw	266.8	18/1	.1217	.1217	.1217	.609	250	33	283	6820	.06364	.07776	451
Partridge/Aw	266.8	26/7	.1013	.0788	.2363	.642	251	98	349	10800	.06169	.07541	465
Ostrich/Aw	300.0	26/7	.1074	.0835	.2506	.68	283	110	393	12100	.05489	.06712	500
Merlin/Aw	336.4	18/1	.1367	.1367	.1367	.684	315	42	357	8540	.05044	.06175	522
Linnet/Aw	336.4	26/7	.1137	.0885	.2654	.72	317	123	440	13500	.04897	.05989	537
Oriole/Aw	336.4	30/7	.1059	.1059	.3177	.741	318	177	494	16700	.04795	.05861	547
Chickadee/Aw	397.5	18/1	.1486	.1486	.1486	.743	373	50	422	9780	.04268	.05230	580
Brant/Aw	397.5	24/7	.1287	.0858	.2574	.772	374	116	490	14100	.04185	.05124	592
Ibis/Aw	397.5	26/7	.1236	.0962	.2885	.783	374	146	520	15800	.04144	.05072	597
Lark/Aw	397.5	30/7	.1151	.1151	.3453	.806	375	209	584	19600	.04059	.04965	608
Pelican/Aw	477	18/1	.1628	.1628	.1628	.814	447	59	507	11500	.03556	.04344	651
Flicker/Aw	477	24/7	.141	.094	.2819	.846	449	139	589	16700	.03487	.04273	663
Hawk/Aw	477.0	26/7	.1354	.1053	.316	.858	449	175	624	18900	.03453	.04231	669
Hen/Aw	477.0	30/7	.1261	.1261	.3783	.883	450	251	701	23400	.03382	.04139	682
Osprey/Aw	556.5	18/1	.1758	.1758	.1758	.879	522	69	591	13200	.03050	.03749	715
Parakeet/Aw	556.5	24/7	.1523	.1015	.3045	.914	524	163	687	19300	.02989	.03667	731
Dove/Aw	556.5	26/7	.1463	.1138	.3413	.927	524	204	728	21900	.02958	.03627	737
Eagle/Aw	556.5	30/7	.1362	.1362	.4086	.953	525	293	818	26800	.02899	.03551	751
Peacock/Aw	605.0	24/7	.1588	.1058	.3175	.953	570	177	746	21000	.02749	.03377	770
Squab/Aw	605.0	26/7	.1525	.1186	.3559	.966	570	222	792	23600	.02588	.03341	777
Teal/Aw	605.0	30/19	.142	.0852	.426	.994	571	311	883	28500	.02672	.03274	791
Kingbird/Aw	636.0	18/1	.188	.188	.188	.94	596	79	675	15000	.02667	.03286	778
Rook/Aw	636.0	24/7	.1628	.1085	.3256	.977	599	186	785	22000	.02616	.03216	794
Grosbeak/Aw	636.0	26/7	.1564	.1216	.3649	.991	599	233	832	24800	.02588	.03179	801
Flamingo/Aw	666.6	24/7	.1667	.1111	.3333	1	628	195	823	23100	.02495	.03069	818
Gannet/Aw	666.6	26/7	.1601	.1245	.3736	1.014	628	245	872	26000	.02470	.03034	825
Starling/Aw	715.5	26/7	.1659	.129	.3871	1.051	674	263	936	27500	.02300	.02830	863

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Redwing/Aw	715.5	30/19	.1544	.0927	.4633	1.081	676	368	1044	33400	.02260	.02777	878
Cuckoo/Aw	795.0	24/7	.182	.1213	.364	1.092	749	232	981	27500	.02093	.02582	913
Drake/Aw	795	26/7	.1749	.136	.408	1.107	749	292	1040	30500	.02070	.02549	922
Tern/Aw	795	45/7	.1329	.0886	.2658	1.063	749	124	873	21500	.02135	.02638	896
Condor/Aw	795	54/7	.1213	.1213	.364	1.092	749	232	981	27800	.02091	.02578	913
Mallard/Aw	795	30/19	.1628	.0977	.4884	1.139	751	409	1160	37100	.02033	.02500	938
Ruddy/Aw	900	45/7	.1414	.0943	.2828	1.131	848	140	988	24000	.01886	.02330	970
Canary/Aw	900	54/7	.1291	.1291	.3873	1.162	848	263	1111	31000	.01849	.02286	986
Rail/Aw	954	45/7	.1456	.0971	.2912	1.165	899	149	1047	25400	.01779	.02210	1003
Cardinal/Aw	954	54/7	.1329	.1329	.3987	1.196	899	279	1177	32900	.01744	.02161	1022
Ortolan/Aw	1033.5	45/7	.1515	.101	.3031	1.212	973	161	1134	27200	.01641	.02044	1054
Curlew/Aw	1033.5	54/7	.1383	.1383	.415	1.245	973	302	1275	35200	.01609	.01997	1074
Bluejay/Aw	1113	45/7	.1573	.1048	.3145	1.258	1048	173	1222	29300	.01606	.01905	1103
Pheasant/Aw	1272	54/19	.1535	.0921	.4604	1.381	1204	364	1568	42400	.01315	.01646	1216
Bobolink/Aw	1431	45/7	.1783	.1189	.3566	1.427	1348	223	1571	37600	.01186	.01503	1283
Lapwing/Aw	1590	45/7	.188	.1253	.3759	1.504	1498	248	1745	41800	.01069	.01366	1365

+Conductor temperature of 75°C ambient temperature 25°C, emissivity 0.5, wind 2 ft./sec., in sun.

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			Individual Wires		Aw Core	Comp. Cable	Al	Aw	Total		DC@ 20°C	AC@ 75°C	
			Al	Aw									
HIGH MECHANICAL STRENGTH													
Grouse/AW	80.0	8/1	.1000	.1670	.1670	.367	75.1	62.6	137.7	4,890	.1942	.2357	227
Petrel/AW	101.8	12/7	.0921	.0921	.2763	.460	96.0	133.9	229.9	9,910	.1425	.1736	281
Minorca/AW	110.8	12/7	.0961	.0961	.2883	.481	104.5	145.8	250.3	10,800	.1326	.1594	297
Leghorn/AW	134.6	12/7	.1059	.1059	.3177	.530	127.0	177.0	304.0	13,000	.1078	.1313	335
Guinea/AW	159.0	12/7	.1151	.1151	.3453	.576	150.0	209.1	359.1	15,300	.09123	.1112	372
Dotterel/AW	176.9	12/7	.1214	.1214	.3642	.607	166.8	232.7	399.5	16,900	.08201	.09988	398
Dorking/AW	190.8	12/7	.1261	.1261	.3783	.631	180.0	251.0	431.0	18,300	.07601	.09261	418
Brahma/AW	203.2	16/19	.1127	.0977	.4885	.714	191.7	411.0	602.7	27,100	.06570	.07994	464
Cochin/AW	211.3	12/7	.1327	.1327	.3981	.664	199.3	278.0	477.3	19,800	.06863	.08364	445

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