

ACSR - Aluminum Conductor Steel Reinforced

APPLICATION: Used as bare overhead transmission cable and as primary and secondary distribution cable. ACSR offers optimal strength for line design. Variable steel core stranding for desired strength to be achieved without sacrificing ampacity.

CONSTRUCTION: Aluminum alloy 1350-H19 wires, concentrically stranded around a steel core. Core wire for ACSR is available with class A, B or C galvanizing; aluminum coated (AZ); or aluminum-clad steel core (AL). Additional corrosion protection is available through the application of grease to the core or infusion of the complete cable with grease. Also available with Non Specular surface finish.

SPECIFICATIONS: ACSR bare conductor meets or exceeds the following ASTM specifications:

B-230 Aluminum wire, 1350-H19 for Electrical Purposes

B-232 Aluminum Conductors, Concentric-Lay-Stranded, Coated Steel Reinforced (ACSR)

B-341 Aluminum-Coated Steel Core Wire for Aluminum Conductors, Steel Reinforced (ACSR/AZ)

B-498 Zinc-Coated Steel Core Wire for Aluminum Conductors, Steel Reinforced (ACSR)

B-500 Metallic Coated Stranded Steel Core for Aluminum Conductors, Steel Reinforced (ACSR)

Code Word	Conductor Size	Stranding (Alu/Steel)	Individual Strand Diameter			Complete Cable OD	Weight			Rated Breaking Strength	Resistance**		Ampacity*
			Alu	Steel	Steel Core		Alu	Steel	Total		DC @ 20°C	AC @ 75°C	
	AWG/kcmil		Inches	Inches	Inches	Inches	lbs/kft	lbs/kft	lbs/kft	lbs	Ohms/kft	Ohms/kft	amps
Turkey	6	6/1	0.0661	0.0661	0.0664	0.198	24.5	11.6	36	1,190	0.6410	0.806	105
Swan	4	6/1	0.0834	0.0834	0.0834	0.250	39.0	18.4	57	1,860	0.4030	0.515	140
Swanate	4	7/1	0.0772	0.1029	0.1029	0.257	39.0	28.0	67	2,360	0.3990	0.519	140
Sparrow	2	6/1	0.1052	0.1052	0.1052	0.316	62.0	29.3	91	2,850	0.2540	0.332	184
Sparate	2	7/1	0.0974	0.1299	0.1299	0.325	62.0	44.7	107	3,640	0.2510	0.338	184
Robin	1	6/1	0.1181	0.1181	0.1181	0.354	78.2	36.9	115	3,550	0.2010	0.268	212
Raven	1/0	6/1	0.1327	0.1327	0.1327	0.398	98.7	46.6	145	4,380	0.1590	0.217	242
Quail	2/0	6/1	0.1489	0.1489	0.1489	0.447	124.3	58.7	183	5,300	0.1260	0.176	276
Pigeon	3/0	6/1	0.1672	0.1672	0.1672	0.502	156.7	74.0	231	6,620	0.1000	0.144	315
Penguin	4/0	6/1	0.1878	0.1878	0.1878	0.563	197.7	93.4	291	8,350	0.0795	0.119	357
Waxwing	266.8	18/1	0.1217	0.1217	0.1217	0.609	250.3	39.2	290	6,880	0.0643	0.079	449
Partridge	266.8	26/7	0.1013	0.0788	0.2364	0.642	251.7	115.5	367	11,130	0.0637	0.078	475
Ostrich	300.0	26/7	0.1074	0.0835	0.2505	0.680	282.9	129.8	413	12,700	0.0567	0.069	492
Merlin	336.4	18/1	0.1367	0.1367	0.1367	0.683	315.8	49.5	365	8,680	0.0510	0.063	519
Linnet	336.4	26/7	0.1137	0.0884	0.2652	0.720	317.1	145.4	463	14,100	0.0505	0.062	529
Oriole	336.4	30/7	0.1059	0.1059	0.3177	0.741	318.2	208.9	527	17,300	0.0502	0.061	535
Chickadee	397.5	18/1	0.1486	0.1486	0.1486	0.743	373.1	58.5	432	9,940	0.0432	0.053	576
Brant	397.5	24/7	0.1287	0.0858	0.2574	0.772	375.0	137.0	512	14,600	0.0430	0.053	584
Ibis	397.5	26/7	0.1236	0.0961	0.2882	0.783	374.7	171.9	547	16,300	0.0428	0.052	587

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	AWG/kcmil		Inches	Inches	Inches		lbs/kft	lbs/kft	lbs/kft		Ohms/kft	Ohms/kft	
Lark	397.5	30/7	0.1151	0.1151	0.3453	0.806	375.8	246.8	623	20,300	0.0425	0.052	594
Pelican	477.0	18/1	0.1628	0.1628	0.1628	0.814	447.8	70.2	518	11,800	0.0360	0.044	646
Flicker	477.0	24/7	0.1410	0.0940	0.2820	0.846	450.1	164.4	615	17,200	0.0358	0.044	655
Hawk	477.0	26/7	0.1354	0.1053	0.3159	0.858	449.6	206.4	656	19,500	0.0356	0.044	659
Hen	477.0	30/7	0.1261	0.1261	0.3783	0.883	451.1	296.2	747	23,800	0.0354	0.043	666
Osprey	556.5	18/1	0.1758	0.1758	0.1758	0.879	522.2	81.8	604	13,700	0.0308	0.038	711
Parakeet	556.5	24/7	0.1523	0.1015	0.3045	0.914	525.1	191.7	717	19,800	0.0307	0.038	721
Dove	556.5	26/7	0.1463	0.1138	0.3414	0.927	525.0	241.0	766	22,600	0.0306	0.038	726
Eagle	556.5	30/7	0.1362	0.1362	0.4086	0.953	526.3	345.6	872	27,800	0.0303	0.037	734
Peacock	605.0	24/7	0.1588	0.1059	0.3177	0.953	570.9	208.7	780	21,600	0.0282	0.035	760
Squab	605.0	26/7	0.1525	0.1186	0.3558	0.966	570.4	261.8	832	24,300	0.0281	0.035	765
Wood Duck	605.0	30/7	0.1420	0.1420	0.4260	0.994	572.0	375.6	948	28,900	0.0279	0.034	774
Teal	605.0	30/19	0.1420	0.0852	0.4260	0.994	572.0	367.4	939	30,000	0.0278	0.034	773
KingBird	636.0	18/1	0.1880	0.1880	0.1880	0.940	597.2	93.6	691	15,700	0.0270	0.033	773
Swift	636.0	36/1	0.1329	0.1329	0.1329	0.930	596.9	46.8	644	13,800	0.0271	0.033	769
Rook	636.0	24/7	0.1628	0.1085	0.3255	0.977	600.0	219.1	819	22,600	0.0268	0.033	784
Grosbeak	636.0	26/7	0.1564	0.1216	0.3648	0.990	599.9	276.2	876	25,200	0.0267	0.033	789
Scoter	636.0	30/7	0.1456	0.1456	0.4368	1.019	601.4	394.9	996	30,400	0.0256	0.033	798
Egret	636.0	30/19	0.1456	0.0874	0.4370	1.019	601.4	386.6	988	31,500	0.0266	0.033	798
Flamingo	666.6	24/7	0.1667	0.1110	0.3330	1.000	629.1	229.7	859	23,700	0.0256	0.032	807
Gannet	666.6	26/7	0.1601	0.1245	0.3735	1.014	628.7	288.5	917	26,400	0.0255	0.031	812
Stilt	715.5	24/7	0.1727	0.1151	0.3453	1.036	675.2	246.5	922	25,500	0.0239	0.029	844
Starling	715.5	26/7	0.1659	0.1290	0.3870	1.051	675.0	309.7	985	28,400	0.0238	0.029	849
Redwing	715.5	30/19	0.1544	0.0926	0.4630	1.081	676.3	434.0	1,110	34,600	0.0236	0.029	859
Coot	795.0	36/1	0.1486	0.1486	0.1486	1.040	746.2	58.5	805	16,800	0.0217	0.027	894
Cuckoo	795.0	24/7	0.1820	0.1213	0.3640	1.092	749.9	273.8	1,024	27,900	0.0215	0.027	901
Drake	795.0	26/7	0.1749	0.1360	0.4080	1.108	750.3	344.2	1,094	31,500	0.0214	0.026	907
Tern	795.0	45/7	0.1329	0.0886	0.2660	1.063	749.8	146.1	896	22,100	0.0216	0.027	887
Condor	795.0	54/7	0.1213	0.1213	0.3639	1.092	749.5	273.6	1,023	28,200	0.0215	0.027	889
Mallard	795.0	30/19	0.1628	0.0977	0.4885	1.140	751.9	483.1	1,235	38,400	0.0213	0.026	918

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	AWG/kcmil		Inches	Inches	Inches	Inches	lbs/kft	lbs/kft	lbs/kft	lbs	Ohms/kft	Ohms/kft	amps
Chutepoke	850.0	45/7	0.1375	0.0917	0.2751	1.100	804.5	159.6	964	23,192	0.0204	0.025	935
Les Boules	864.9	42/7	0.1435	0.0797	0.2391	1.102	813.4	121.1	935	22,480	0.0201	0.025	950
Ruddy	900.0	45/7	0.1414	0.0943	0.2829	1.131	848.7	165.5	1,014	24,400	0.0191	0.024	958
Canary	900.0	54/7	0.1291	0.1291	0.3873	1.162	849.0	309.9	1,159	31,900	0.0190	0.024	961
Rail	954.0	45/7	0.1456	0.0971	0.2913	1.165	899.9	175.5	1,075	25,900	0.0180	0.023	993
Cardinal	954.0	54/7	0.1329	0.1329	0.3987	1.196	900.7	328.4	1,228	33,800	0.0179	0.023	996
Ortolan	1033.5	45/7	0.1515	0.1010	0.3030	1.212	974.3	189.8	1,164	27,700	0.0167	0.021	1,043
Curlew	1033.5	54/7	0.1383	0.1383	0.4149	1.245	974.3	355.6	1,330	36,600	0.0165	0.021	1,047
Beaumont	1113.0	42/7	0.1628	0.0904	0.2712	1.250	1046.5	155.5	1,202	28,300	0.0156	0.020	990
Bluejay	1113.0	45/7	0.1573	0.1049	0.3147	1.259	1050.0	204.8	1,255	29,800	0.0155	0.019	1,092
Finch	1113.0	54/19	0.1436	0.0862	0.4310	1.293	1056.0	376.0	1,432	39,100	0.0154	0.020	1,093
Bunting	1192.5	45/7	0.1628	0.1085	0.3255	1.302	1125.0	219.1	1,344	32,000	0.0144	0.018	1,139
Grackle	1192.5	54/19	0.1486	0.0892	0.4460	1.338	1130.0	402.7	1,533	41,900	0.0144	0.018	1,140
Bittern	1272.0	45/7	0.1681	0.1121	0.3363	1.345	1200.0	233.9	1,434	34,100	0.0135	0.017	1,184
Pheasant	1272.0	54/19	0.1535	0.0921	0.4605	1.382	1206.0	429.3	1,635	43,600	0.0135	0.017	1,187
Dipper	1351.5	45/7	0.1733	0.1155	0.3465	1.386	1275.0	248.3	1,523	36,200	0.0127	0.016	1,229
Martin	1351.5	54/19	0.1582	0.0949	0.4745	1.424	1281.0	455.8	1,737	46,300	0.0127	0.016	1,232
Bobolink	1431.0	45/7	0.1783	0.1189	0.3567	1.427	1350.0	263.1	1,613	38,300	0.0120	0.015	1,272
Plover	1431.0	54/19	0.1628	0.0977	0.4885	1.465	1357.0	483.1	1,840	49,100	0.0120	0.016	1,275
Nuthatch	1510.5	45/7	0.1832	0.1221	0.3663	1.465	1425.0	277.4	1,702	40,100	0.0114	0.015	1,313
Parrot	1510.5	54/19	0.1672	0.1003	0.5015	1.505	1431.0	509.2	1,940	51,700	0.0114	0.015	1,318
Lapwing	1590.0	45/7	0.1880	0.1253	0.3759	1.504	1500.0	292.2	1,792	42,200	0.0108	0.014	1,354
Falcon	1590.0	54/19	0.1716	0.1030	0.5150	1.545	1507.0	537.0	2,044	54,500	0.0108	0.014	1,359
Chukar	1780.0	84/19	0.1456	0.0874	0.4370	1.602	1688.0	386.6	2,075	51,000	0.0097	0.013	1,453
Bluebird	2156.0	84/19	0.1602	0.0961	0.4805	1.762	2044.0	467.4	2,511	60,300	0.0081	0.011	1,623
Kiwi	2167.0	72/7	0.1735	0.1157	0.3471	1.735	2055.0	248.9	2,304	49,800	0.0080	0.011	1,607
Thrasher	2312.0	76/19	0.1744	0.0814	0.4070	1.802	2191.0	335.4	2,527	56,700	0.0075	0.010	1,673
Joree	2515.0	76/19	0.1819	0.0849	0.4245	1.880	2384.0	364.8	2,749	61,700	0.0069	0.009	1,751
High Mechanical Strength													
Grouse	80.0	8/1	0.1000	0.1670	0.1670	0.367	75.1	73.9	149	5,200	0.2070	0.261	204

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	AWG/kcmil		Inches	Inches	Inches		lbs/kft	lbs/kft	lbs/kft		Ohms/kft	Ohms/kft	
Petrel	101.8	12/7	0.0921	0.0921	0.2763	0.461	96.0	158.0	254	10,400	0.1580	0.239	237
Minorca	110.8	12/7	0.0961	0.0961	0.2883	0.481	103.9	172.1	276	11,300	0.1450	0.223	246
Leghorn	134.6	12/7	0.1059	0.1059	0.3177	0.530	127.0	209.0	336	13,600	0.1200	0.189	273
Guinea	159.0	12/7	0.1151	0.1151	0.3453	0.576	149.2	246.8	396	16,000	0.1010	0.165	297
Dotterel	176.9	12/7	0.1214	0.1214	0.3642	0.607	166.4	274.6	441	17,300	0.0911	0.151	312
Dorking	190.8	12/7	0.1261	0.1261	0.3783	0.631	179.7	296.3	476	18,700	0.0845	0.142	324
Brahma	203.2	16/19	0.1127	0.0977	0.4885	0.714	190.0	485.0	675	28,400	0.0764	0.135	341
Cochin	211.3	12/7	0.1327	0.1327	0.3981	0.664	198.8	328.2	527	30,700	0.0764	0.131	340

All values are nominal and subject to correction

* Current ratings based on 75°C conductor temperature, 25°C ambient temperature, emissivity 0.5, 2ft/sec wind in sun.

** Resistance is calculated using ASTM standard increments of stranding, and metal conductivity of 61.2% IACS for Alu (1350) and 8% IACS for steel. AC (60Hz) resistance includes current dependent hysteresis loss factor for 1 and 3 layer constructions.