



TANO

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河南泰诺电缆有限公司

HENAN TANO CABLE CO.,LTD.



ACSR to ASTM B232/B232M STANDARD



Henan Tano Cable Co., Ltd.(Tano Cable for short), is a leading and professional manufacturer of cable and wire with more than 20 years' history and manufacturing experience, located in Zhengzhou city which is the capital of Henan province, China.

Tano Cable aims at providing integral power solution for international customers. We are working together as one company to provide products and technologies for building, maintaining and advancing the power and information infrastructures that connect the world. We mainly have the following products with strong competitiveness: All Aluminum Conductors (AAC), All Aluminum Alloy Conductors (AAAC), Aluminum Conductors Steel Reinforcement (ACSR) , Aerial Bundled Cables (ABC), building wire, welding cable, control cable, instrument cable, rubber cable, PVC insulated power cable, XLPE insulated power cable up to 500KV, customer-tailored cable and cable accessories, conforming to many different Country or international standard, such as IEC, HAR, BS, DIN, ICEA, ASTM, SABS, AS/NZS, JIS and so on.

Tano Cable pays great importance on the quality. We have strong teams and equipments for both production and inspection. Moreover, we have been awarded many certificates of ISO, CE, SONCAP, others from China and abroad. We keep improving our quality management system to meet the client's final satisfaction.

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Tano Cable has provided services to the global clients who working in all areas of the energy, construction, industrial, specialty and communications market, and obtained the client's trust and compliment.

Welcome your any inquiry! Welcome your any visit! Welcome your any contact! We will take our biggest sincerity to be your long-term friend and partner.





Aluminum Conductor Steel reinforced (ACSR) Cables to ASTM B232 / B232M Standard

APPLICATION

ACSR conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

STANDARD

Basic design to ASTM B232 / B232M standard.

CONSTRUCTION

ACSR conductors are formed by several wires of aluminium and galvanized steel, stranded in concentric layers. The wire or wires which form the core, are made of galvanized steel and the external layer or layers, are of aluminium. Galvanized steel core consist normally of 1, 7 or 19 wires. The diameters of steel and aluminium wires can be the same, or different. By varying the relative proportions of aluminium and steel, the required characteristics for any particular application can be reached. A higher U. T. S. Can be obtained, by increasing steel content, and a higher current carrying capacity by increasing aluminium content.

ELECTRICAL PROPERTIES

Density@20°C	Aluminum: 2.703 kg/dm
	Galvanized Steel: 7.80 kg/dm
Temperature Coefficient@20°C	Aluminum: 0.00403 (°C)
Resistivity@20°C	Aluminum: Should not exceed 0.028264
Linear Expansivity	Aluminum: 23 x10 (°C)
	Galvanized Steel: 11.5 x10 (1/°C)

SERVICE CONDITIONS

Ambient Temperature	-5°C - 50°C
Wind Pressure	80 - 130kg/m ²
Seismic Acceleration	0.12 - 0.05g
Isokeraunic Level	10 - 18
Relative Humidity	5 - 100%

CONSTRUCTION PARAMETERS

Code	Stranding		Stranding			Overall Diameter	Weight	Breaking Load	Electrical Resistance @20°	Current Rating*
	AL	Steel	AL	Steel	Total					
	No.xmm	No.xmm	mm ²	mm ²	mm ²					
Turkey	13.3	2.22	6/1.68	1/1.68	5.04	15.52	53.6	4.98	2.1499	76
Swan	21.2	3.53	6/2.12	1/2.12	6.36	24.71	85.3	7.83	1.3501	101
Swanate	21.1	5.35	7/1.96	1/2.61	6.53	26.47	99.6	9.79	1.3539	102
Sparrow	33.6	5.6	6/2.67	1/2.67	8.01	39.19	135.7	11.92	0.8512	135
Sparate	33.5	8.55	7/2.47	1/3.30	8.24	42.09	158.7	15.08	0.8525	135
Robin	42.4	7.07	6/3.00	1/3.00	9	49.48	171.1	14.86	0.6742	156
Raven	53.5	8.92	6/3.37	1/3.37	10.11	62.44	216.1	18.33	0.5343	180
Quail	67.3	11.22	6/3.78	1/3.78	11.34	78.55	272	22.46	0.4247	207
Pigeon	85.1	14.19	6/4.25	1/4.25	12.75	99.31	343	28.02	0.3359	239
Penguin	107	17.87	6/4.77	1/4.77	14.31	125.09	432.7	35.36	0.2667	275
Waxwing	135	7.5	18/3.09	1/3.09	15.45	142.48	430.2	29.8	0.2129	313
Partridge	135	21.99	26/2.57	7/2.00	16.28	156.86	545.9	47.15	0.2141	316
Ostrich	152	24.71	26/2.73	7/2.12	17.28	176.9	613.4	53.38	0.1897	341
Merlin	170	9.46	18/3.47	1/3.47	17.35	179.68	542.8	37.36	0.1688	361
Linnet	171	27.83	26/2.89	7/2.25	18.31	198.38	687.5	59.16	0.1693	365
Onole	171	39.78	30/2.69	7/2.69	18.83	210.28	783.3	72.06	0.1698	367
Chickadee	201	11.16	18/3.77	1/3.77	18.85	212.09	641.3	43.15	0.143	400
Brant	202	26.13	24/3.27	7/2.18	19.62	227.69	761	61.83	0.1433	403
Ibis	201	32.73	26/3.14	7/2.44	19.88	234.07	812.4	68.05	0.1434	404
Lark	201	46.88	30/2.92	7/2.92	20.44	247.78	925.2	84.07	0.1441	406
Pelican	242	13.46	18/4.14	1/4.14	20.7	255.77	769.7	51.15	0.1186	448
Flicker	242	31.4	24/3.58	7/2.39	21.49	272.98	913.5	72.06	0.1195	450
Hawk	242	39.19	26/3.44	7/2.67	21.77	280.84	975.1	81.84	0.1195	451
Hen	241	56.3	30/3.20	7/3.20	22.4	297.57	1110.6	98.3	0.12	453
Osprey	282	15.69	18/4.47	1/4.47	22.35	298.16	897.7	59.6	0.1017	492
Parakeet	282	36.6	24/3.87	7/2.58	23.22	318.91	1065.6	83.18	0.1023	495
Dove	283	45.92	26/3.72	7/2.89	23.55	328.51	1138.6	94.3	0.1022	497

Eagle	282	65.82	30/3.46	7/3.46	24.22	347.89	1295.6	114.76	0.1026	499
Peacock	306	39.78	24/4.03	7/2.69	24.19	345.91	1158.9	90.74	0.0943	520
Squab	306	49.81	26/3.87	7/3.01	24.51	355.64	1237	101.41	0.0944	521
Wood Duck	307	71.65	30/3.61	7/3.61	25.27	378.71	1408.4	121.43	0.0943	525
Teal*	307	69.62	30/3.61	19/2.16	25.24	376.68	1396.6	124.54	0.0943	525
Kingbird	323	17.95	18/4.78	1/4.78	23.9	340.96	1026.6	68.05	0.089	533
Swift	323	8.97	36/3.38	1/3.38	23.66	331.99	956.5	60.05	0.089	532
Rook	323	41.88	24/4.14	7/2.76	24.84	364.95	1217.5	95.19	0.0894	537
Grosbeak	322	52.49	26/3.97	7/3.09	25.15	374.33	1300.8	104.97	0.0897	537
Scoter	323	75.26	30/3.70	7/3.70	25.9	397.82	1480.7	127.66	0.0897	541
Egret*	323	73.54	30/3.70	19/2.22	25.9	396.1	1469	130.77	0.0897	541
Flamingo	337	43.72	24/4.23	7/2.82	25.38	380.99	1276.6	99.64	0.0856	551
Gannet	338	54.9	26/4.07	7/3.16	25.76	393.16	1363.3	110.31	0.0854	553
Stilt	363	46.88	24/4.39	7/2.92	26.32	410.15	1370.4	107.2	0.0795	576
Starling	362	59.15	26/4.21	7/3.28	26.68	421.08	1463.7	118.32	0.0798	577
Redwing*	362	82.41	30/3.92	19/2.35	27.43	444.47	1650.6	143.23	0.0799	580
Coot	402	11.16	36/3.77	1/3.77	26.39	413.02	1195.8	73.39	0.0715	607
Tern	404	27.83	45/3.38	7/2.25	27.03	431.6	1331.8	94.3	0.0715	610
Condor	402	52.15	54/3.08	7/3.08	27.72	454.48	1520.7	118.32	0.0718	612
Cuckoo	402	52.15	24/4.62	7/3.08	27.72	454.48	1522.2	117.43	0.0718	612
Drake	403	65.44	26/4.44	7/3.45	28.11	468	1626.4	131.66	0.0717	615
Mallard*	404	91.78	26/4.44	7/3.45	28.96	495.62	1836	159.24	0.0717	619
Ruddy	456	31.87	45/3.59	7/2.40	28.74	487.17	1507.3	104.53	0.0634	656
Canary	456	59.15	54/3.28	7/3.28	29.52	515.43	1723.1	134.33	0.0633	660
Catbird	485	13.46	36/4.14	1/4.14	28.98	498.07	1434.4	86.74	0.0593	679
Rail	484	33.54	45/3.70	7/2.47	29.61	517.38	1598.1	110.76	0.0597	680
Cardinal	485	62.81	54/3.38	7/3.38	30.42	547.34	1825.9	142.34	0.0596	685
Tanager	523	14.52	36/4.30	1/4.30	30.1	537.31	1553.5	93.85	0.055	710
Orotian	524	36.31	45/3.85	7/2.57	30.81	560.18	1730.5	118.32	0.0551	713
Curlew	523	67.73	54/3.51	7/3.51	31.59	590.24	1977.6	153.9	0.0553	716
Bluejay	565	38.9	45/4.00	7/2.66	31.98	604.39	1866	127.66	0.0511	745
Finch*	565	71.57	54/3.65	19/2.19	32.85	636.6	2127.8	164.58	0.0514	748
Bunting	606	41.88	45/4.14	7/2.76	33.12	647.64	1996.9	136.55	0.0477	776
Grackle*	603	76.89	54/3.77	19/2.27	33.97	679.68	2278.1	176.59	0.0481	777
Skylark	646	17.95	36/4.78	1/4.78	33.46	663.97	1913.6	115.65	0.0445	804
Bittern	644	44.66	45/4.27	7/2.85	34.17	689.06	2130.8	145.89	0.0448	805
Pheasant*	645	81.71	54/3.90	19/2.34	35.1	726.79	2431.4	183.26	0.045	808
Dipper	684	47.2	45/4.40	7/2.93	35.19	731.44	2263.2	154.79	0.0422	834
Martin*	685	86.67	54/4.02	19/2.41	36.17	772.06	2581.7	194.82	0.0423	838
Bobolink	725	50.14	45/4.53	7/3.02	36.24	775.41	2397.2	164.13	0.0398	862
Plover*	727	91.78	54/4.14	19/2.48	37.24	818.7	2734.9	206.39	0.0399	866
Nuthatch	764	52.83	45/4.65	7/3.10	37.2	817.03	2529.6	171.25	0.0378	888
Parrot*	766	97.03	54/4.25	19/2.55	38.25	863.09	2883.7	217.51	0.0379	892
Lapwing	808	55.6	45/4.78	7/3.18	38.22	863.13	2663.5	180.14	0.0358	916

Falcon*	806	102.43	54/4.36	19/2.62	39.26	908.66	3038.5	229.52	0.036	919
Chukar*	903	73.54	84/3.70	19/2.22	40.7	976.72	3083.1	217.51	0.0321	976
Bluebird*	1093	88.84	84/4.07	19/2.44	44.76	1181.68	3731.9	256.65	0.0266	1083
Kivi*	1100	47.52	72/4.41	7/2.94	44.1	1147.28	3423.9	215.28	0.0264	1083
Thrasher*	1171	63.94	76/4.43	19/2.07	45.79	1235.36	3754.2	243.75	0.0248	1122
Grouse**	40.5	14.12	8/2.54	1/4.24	9.32	54.66	221.4	21.75	0.7089	153
Petrel**	51.6	30.1	12/2.34	7/2.34	11.7	81.71	377.7	42.08	0.5595	181
Minorca**	56.1	32.73	12/2.44	7/2.44	12.2	88.84	411.1	45.81	0.5146	191
Leghorn**	68.2	39.78	12/2.69	7/2.69	13.45	107.98	499.2	55.16	0.4234	215
Guinea**	80.4	46.88	12/2.92	7/2.92	14.6	127.24	589.7	64.94	0.3593	238
Dotterel**	89.4	52.15	12/3.08	7/3.08	15.4	141.56	656.1	70.28	0.323	254
Dorking**	96.5	56.3	12/3.20	7/3.20	16	152.81	707.8	75.62	0.2992	267
Cochin**	107	62.44	12/3.37	7/3.37	16.85	169.48	783.9	84.07	0.2698	284
Brahma ^Δ	103	91.78	12/3.37	7/3.37	18.12	194.57	1003.8	114.76	0.2809	283

* The items, marked with "*" are not in our current product range and the details are for information only.

The items, marked with "" are ACSR Cables with high strength stranding.

(*) Note: The values of current rating mentioned in above Table are based on wind velocity of 0.6 metre/second, solar heat radiation of 1200 watt/metre², ambient temperature of 50° C & conductor temperature of 80°C.

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TECHNICAL DATA

Numbers of Wires		Final Modulus of Elasticity		Coefficient of Linear Expansion	
Al	Steel	Kg/mm ²	lb/in ²	1/C°	1/F°
6	1	81	11.5 x10 ⁵	19.1 x10 ⁻⁶	10.6 x10 ⁻⁶
6	7	77	11.0 x10 ⁵	19.8 x10 ⁻⁶	11.0 x10 ⁻⁶
12	7	107	15.2 x10 ⁵	15.3 x10 ⁻⁶	8.5 x10 ⁻⁶
18	1	67	9.5 x10 ⁵	21.2 x10 ⁻⁶	11.8 x10 ⁻⁶
24	7	74	10.5 x10 ⁵	19.6 x10 ⁻⁶	10.9 x10 ⁻⁶
26	7	77	10.9 x10 ⁵	18.9 x10 ⁻⁶	10.5 x10 ⁻⁶
28	7	79	11.2 x10 ⁵	18.4 x10 ⁻⁶	10.2 x10 ⁻⁶
30	7	82	11.6 x10 ⁵	17.8 x10 ⁻⁶	9.9 x10 ⁻⁶
30	19	80	11.4 x10 ⁵	18.0 x10 ⁻⁶	10.0 x10 ⁻⁶
32	19	82	11.7 x10 ⁵	17.5 x10 ⁻⁶	9.7 x10 ⁻⁶
54	7	70	9.9 x10 ⁵	19.3 x10 ⁻⁶	10.7 x10 ⁻⁶
54	19	68	9.7 x10 ⁵	19.4 x10 ⁻⁶	10.8 x10 ⁻⁶



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