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**河南泰诺电缆有限公司**

HENAN TANO CABLE CO.,LTD.



# AAAC to BS 3242 STANDARD



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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.

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.







# All Aluminum Alloy Conductor (AAAC) Cables to BS 3242 Standard

## APPLICATION

AAAC is mainly used as bare overhead transmission cable and as primary and secondary distribution cable. It is also suitable for laying across basins, rivers and valleys where special geographical textures exist.

## STANDARD

Basic design to BS 3242 standard.

## CONSTRUCTION

AAAC cable consists of aluminum alloy wires. The aluminum alloy wires are concentrically stranded. This section deals with heat-treatable magnesium silicon type aluminium alloys to the applicable international standard, the electrical and mechanical properties of which all fall within the values suggested by relevant standard. Conductors to all other recognized specifications can also be supplied. The alloys referred to have higher strength but lower conductivity than pure aluminium. Being lighter, alloy conductors can sometimes be used to advantage in place of the more conventional ACSR; Having lower breaking loads than the later, their use becomes particularly favourable when ice and wind loadings are low.

## ELECTRICAL PROPERTIES

Density@20°C	2.70 kg/dm
Temperature Coefficient@20°C	0.00360 (°C)
Resistivity@20°C	0.0326 Ohms mm <sup>2</sup> /m
Linear Expansivity	23 x10 <sup>-6</sup> (°C)

## SERVICE CONDITIONS



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

## CONSTRUCTION PARAMETERS

Code	AL Nominal Area	Cu Nominal Area Equivalent	Total Area	Stranding	Overall Diameter	Weight
	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	No. xmm	mm	kg/km
-	-	6.45	11.7	7/1.47	4.41	32.2
Box	-	9.68	18.8	7/1.85	5.55	51.7
Acacia	-	12.9	21.9	7/2.08	6.24	66.1
Almond	25	16.1	30.1	7/2.34	7.02	82.9
Ceda	30	19.4	35.5	7/2.54	7.62	97.8
-	40	22.6	42.2	7/2.77	8.31	116.4
Fir	50	25.8	47.8	7/2.95	8.85	131.8
Hazel	100	32.3	59.9	7/3.30	9.9	165
Pine	-	38.7	71.7	7/3.61	10.83	197.7
-	-	45.2	84.1	7/3.91	11.73	231.6
Willow	150	48.4	89.8	7/4.04	12.12	247.5
-	175	51.6	96.5	7/4.19	12.57	266.2
-	300	58.1	108.8	7/4.45	13.35	299.8
Oak	-	64.5	118.9	7/4.65	13.95	327.8
-	-	80.6	118.8	19/2.82	14.1	327.6
Mulberry	-	96.8	151.1	19/3.18	15.9	416.7
Ash	-	113	180.7	19/3.48	17.4	498.1
Elm	-	129	211	19/3.76	18.8	582.1
Poplar	-	145	239	37/2.87	20.09	658.8
-	-	161	270.8	37/3.05	21.35	746.7
Sycamore	-	194	303	37/3.23	22.61	834.9
Upas	-	226	362.1	37/3.53	24.71	998.6
-	-	258	421.8	37/3.81	26.47	1163
Yew	-	-	479.9	37/4.06	28.42	1323

(\*)Note: The values of current rating mentioned in above Table are based on wind velocity of 0.6 metre/second, solar heat radiation of 1200watt/metre<sup>2</sup>., ambient temperature of 50°C & conductor temperature of 80 °C.

## TECHNICAL DATA

Code	Al nominal	maximum resistance dC at 20°		Current rating	
	Area			Temperate	Tropical
	mm <sup>2</sup>	Ω / km	Ω / 1000ft	Amp	Amp
-	-	2.87	0.873	90	73
Box	-	1.79	0.544	121	98
Acacia	-	1.4	0.426	140	114
Almond	25	1.11	0.339	162	131
Ceda	30	0.944	0.288	180	145
-	40	0.794	0.242	200	162
Fir	50	0.7	0.213	217	175
Hazel	100	0.559	0.17	250	201
Pine	-	0.467	0.142	279	224
-	-	0.398	0.121	309	247
Willow	150	0.373	0.114	322	258
-	175	0.347	0.106	337	270
-	300	0.308	0.0938	343	290
Oak	-	0.282	0.0859	384	307
-	-	0.282	0.086	385	307
Mulberry	-	0.222	0.0676	448	356
Ash	-	0.185	0.0565	501	398
Elm	-	0.159	0.048	553	438
Poplar	-	0.14	0.0427	598	473
-	-	0.124	0.0337	647	511
Sycamore	-	0.111	0.0377	694	547
Upas	-	0.0925	0.0282	776	610
-	-	0.0794	0.0242	854	669
Yew	-	0.0698	0.0213	925	723



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