HENAN QINGZHOU ELECTRICAL CABLE CO., LTD

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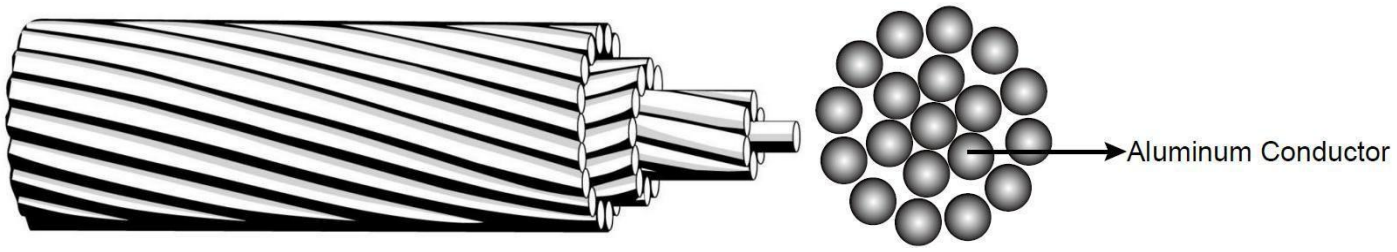
British BS EN 50182 Standard All Aluminum Conductor (AAC) Cables bare

Application

AAC conductor is also known as aluminum stranded conductor which are used in urban areas where spans are usually short but high conductivity is required and are in common use on overhead lines for in low, medium and high voltage. The excellent corrosion resistance of aluminium has made AAC a conductor of choice in coastal areas.Although aluminium-to-copper connections can be made, it is better to use aluminium conductors for service connections, as various forms of covered cable are available for this purpose.

Construction



Concentric lay stranded Aluminium Conductor (AAC) is manufactured from electrolytically refined aluminium with a minimum purity of 99.7%. and made up of one or more strands of hard drawn 1350 aluminum alloy.

Electrical Properties

Density:20℃	2.703 kg/dm
Temperature Coefficient:20°C	0.00403 (°C)
Resistivity:20°C	0.028264
Linear Expansivity	23 x10^{-6} (°C)

Service Conditions

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Ambient Temperature	-5°C - 50°C
Wind Pressure	80 – 130kg/m2
Seismic Acceleration	0.12 - 0.05g
Isokeraunic Level	10 – 18
Relative Humidity	5 – 100%

Construction Parameters

BS EN 50182

Code	Nominal Area		Stranding	Overall Diameter	Weight	Rated Strength	Electrical Resistance	Current Rating*
	Nominal	Teorical						
	mm^2	mm^2	No.×mm	mm	kg/km	KN	Ω/Km	A
Gnat	25	26.9	7/2.21	6.63	73	4.83	1.0643	115
Mosquito	35	36.9	7/2.59	7.77	101	6.27	0.7749	140
Ladybird	40	42.8	7/2.79	8.37	117	7.28	0.6678	154
Bluebottle	70	73.6	7/3.66	10.98	201	11.78	0.388	215
Earwig	75	78.6	7/3.78	11.34	215	12.57	0.3638	223
Grasshopper	80	84.1	7/3.91	11.73	230	13.45	0.34	233
Clegg	90	95.6	7/4.17	12.51	261	15.3	0.2989	252
Beetle	100	106.4	19/2.67	13.35	292	18.08	0.2701	269
Bee	120	132	7/4.90	14.7	361	21.12	0.2165	307
Caterpillar	180	185.9	19/3.53	17.65	511	29.75	0.1546	379
Spider	220	237.6	19/3.99	19.95	653	38.01	0.121	440
Moth	350	373.1	19/5.00	25	1025	59.69	0.077	579
Drone	350	372.4	37/3.58	25.06	1027	59.59	0.0774	577
Maybug	450	486.1	37/4.09	28.63	1341	77.78	0.0593	677
Scorpion	500	529.8	37/4.27	29.89	1461	84.77	0.0544	713

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Cicada	600	628.3	37/4.65	32.55	1733	100.54	0.0459	788

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

Technical Data

Numbers of Wires	Final Modules of Elasticity		Coeficient of linear Expansion	
AL	Kg/mm^2	lb/in^2	1/Co	1/Fo
7	6000	8.5×10^{6}	23.0×10^{-6}	112.8×10^{-6}
19	5700	8.1×10^{6}	23.0×10^{-6}	112.8×10^{-6}
37	5700	8.1×10^{6}	23.0×10^{-6}	112.8×10^{-6}
61	5500	7.8×10^{6}	23.0×10^{-6}	112.8×10^{-6}
91	5500	7.8×10^{6}	23.0×10^{-6}	112.8×10^{-6}