



# Caledonian

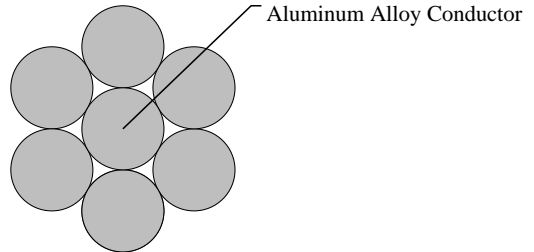
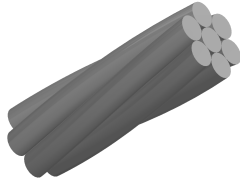
Aluminium Conductor Cables

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## All Aluminum Alloy Conductor (AAAC) Cables

BS 3242 6.45sqmm



## APPLICATIONS

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 features exist.

## STANDARDS

BS 3242

## CABLE 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 latter, their use becomes particularly favourable when ice and wind loadings are low.

## PHYSICAL AND THERMAL PROPERTIES

Ambient Temperature:  $-5^{\circ}\text{C}$  -  $50^{\circ}\text{C}$

Isokeraunic level: 10 - 18

Relative Humidity: 5 - 100%

### Electrical Properties

Density@ $20^{\circ}\text{C}$ : 2.7 kg/dm

Temperature Coefficient@ $20^{\circ}\text{C}$ : 0.0036 ( $^{\circ}\text{C}$ )

Resistivity@ $20^{\circ}\text{C}$ : 0.0326 Ohms  $\text{mm}^2/\text{m}$

Linear Expansivity:  $23 \times 10^{-6}$  ( $^{\circ}\text{C}$ )

## MECHANICAL PROPERTIES

Wind Pressure: 80 - 130kg/m<sup>2</sup>

Seismic Acceleration: 0.12 - 0.05g

## DIMENSION AND PARAMETERS



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AL Nominal Area	Cu Nominal Area Equivalent	Total Area	No./Nominal Diameter of Strands	Conductor Diameter	Cable Weight
mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	no./mm	mm	kg/km
--	6.45	11.7	7/1.47	4.41	32.2