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All Aluminum-Alloy Conductor

BS EN50183, Specification for All Aluminium-Alloy Stranded Conductors

Code Name	Calculated Cross Section (mm2)	Stranding and wire diameter	Approx. Overall diameter	Weight	Rated Strength
		No./mm	mm	kg/km	kN
Box	18.8	7/1.85	5.55	51.4	5.55
Acacia	23.8	7/2.08	6.24	64.9	7.02
Almond	30.1	7/2.34	7.02	82.2	8.88
Cedar	35.5	7/2.54	7.62	96.8	10.46
Deodar	42.2	7/2.77	8.31	115.2	12.44
Fir	47.8	7/2.95	8.85	130.6	14.11
Hazel	59.9	7/3.30	9.9	163.4	17.66
Pine	71.6	7/3.61	10.8	195.6	21.14
Holly	84.1	7/3.91	11.7	229.5	24.79
Willow	89.7	7/4.04	12.1	245,0	26.47
Oak	118.9	7/4.65	14	324.5	35.07
Mulberry	150.9	19/3.18	15.9	414.3	44.52
Ash	180.7	19/3.48	17.4	496.1	53.31
Elm	211	19/3.76	18.8	579.2	62.24
Poplar	239.4	37/2.87	20.1	659.4	70.61
Sycamore	303.2	37/3.23	22.6	835.2	89.4
Upas	362.1	37/3.53	24.7	997.5	106.82
Yew	479	37/4.06	28.4	1319.6	141.31
Totara	498.1	37/4.14	29	1372.1	146.93
Rubus	586.9	61/3.50	31.5	1622	173.13
Sorbus	659.4	61/3.71	33.4	1822.5	194.53
Araucaria	821.1	61/4.14	37.3	2269.4	242.24
Redwood	996.2	61/4.56	41	2753.2	293.88

Physical contents of aluminum alloy:

1. Resistivity - 0.0326 Ohms mm2/m at 20°C

2. Density - 2.70 kgm/dm3 at 20°C

3. Coefficient of Linear Expansion - 23 x 10-6 / °C

4. Constant Mass Temperature Coefficient (a) - 0.00360/ °C

5. Material - Heat treated Al. Mg. Si. Alloy - Approximately 0.5% Mg & 0.5% Si