

# LV PVC Insulated Aerial Cables Single & 2 Core Copper



0.6/1kV PVC insulated aerial cables to AS/NZS 5000.1

Hard drawn copper conductors



## Physical data

Nominal conductor area	Number and nominal diameter of wires	Nominal conductor diameter	Average insulation thickness	Nominal diameter over insulation	Approximate mass
mm <sup>2</sup>	no./mm	mm		mm	kg/km
<b>Single Core</b>					
6	7/1.04	3.1	1.0	5.3	81
10	7/1.35	4.1	1.0	6.3	123
16	7/1.70	5.1	1.0	7.3	183
25	19/1.35	6.8	1.2	9.4	308
35	19/1.53	7.7	1.2	10.3	385
50	19/1.78	8.9	1.4	11.9	522
70	19/2.14	10.7	1.4	13.7	729
<b>2 Core</b>					
6	7/1.04	3.1	1.0	5.3x11.1	157
10	7/1.35	4.1	1.0	6.3x13.1	243
16	7/1.70	5.1	1.0	7.3x15.1	362
25	19/1.35	6.8	1.2	9.4x19.3	609

## Electrical Properties

Nominal conductor area	DC resist at 20°C	AC resist at 50Hz 80°C	Inductive reactance at 50Hz	Voltage drop at 50Hz 75°C	Continuous current carrying capacity. A			Fault current rating	Minimum bending radius (installed) Cable	Min. breaking load of cable	Rec. tension		Modulus of elasticity of conductor	Coeff. of linear expansion
					still air	1m/s wind	2m/s wind				Highest everyday tension	Max. working tension		
mm <sup>2</sup>	Ω/km	Ω/km	Ω/km	mV/A.m	kA for 1S				kN	kN	kN	GPa	x10 <sup>-6</sup> /°C	
<b>Single Core</b>														
6	3.17	3.82	0.37	6.65	36	72	80	0.6	25	2.30	0.45	0.68	112	17
10	1.88	2.27	0.36	3.98	50	100	114	1.0	30	3.90	0.73	1.14	112	17
16	1.18	1.42	0.34	2.54	70	128	150	1.6	35	5.90	1.09	1.67	112	17
25	0.749	0.905	0.32	1.68	90	168	195	2.7	40	10.44	1.88	2.93	110	17
35	0.54	0.652	0.31	1.25	110	210	235	3.4	65	12.75	2.30	3.55	110	17
50	0.399	0.482	0.30	0.997	135	245	280	4.8	75	17.32	3.13	4.85	110	17
70	0.276	0.033	0.30	0.783	168	310	350	7.0	85	25.00	4.50	7.01	110	17
<b>2 Core</b>														
6	3.17	3.82	0.10	7.75	35	52	60	0.6	35	4.63	0.82	1.30	112	17
10	1.88	2.27	0.095	4.53	45	70	83	1.0	40	7.80	1.40	2.20	112	17
16	1.18	1.42	0.094	2.84	57	95	110	1.6	50	11.82	2.15	3.30	112	17
25	0.749	0.905	0.082	1.80	70	125	145	2.7	60	20.80	3.75	5.80	110	17

### Note:

- Reactance and voltage drop are based on three cables laid in flat formation spaced 0.46m apart. The values can also be applied to single-phase circuits or 3-phase circuits with cables in trefoil formation. For single-phase circuits the voltage drop values should be multiplied by 1.155. Continuous current ratings are based on an ambient temperature of 40°C, maximum conductor temperature of 75°C and solar radiation intensity of 1000W/m<sup>2</sup>. Fault current ratings are based on initial and final conductor temperatures of 75°C and 150°C respectively.