Correction factors for direct solar radiation		
Cross-sectional area of conductor mm²	Correction Factor	
	Solar Radiation	
	1000 W/m² (Coastal)	1250 W/m² (Highveld)
1,5 - 10	0,70	0,62
16 - 35	0,68	0,57
50 - 95	0,65	0,53
120 - 185	0,62	0,49
240 - 400	0,59	0,44

Short Circuit Ratings for PVC Insulated Cables

$$I_{sc} = \frac{K \times A}{\sqrt{t}} \text{ Amps}$$

where I_{sc} = *Short circuit rating in amps*
K = *A constant combining temperature limits and properties of conductor materials*
A = *Area of conductor*
t = *Duration of short circuit in seconds*

Values of conductor / temperature constant K

Insulation material	Conductor material	Operating Temp °C	Short circuit Temp °C	K factor
PVC	Copper	70	160	115
PVC	Aluminium	70	160	76

Bending Radii

PVC Insulated Cables 1000 V

Multi and Single Core 16 - 50 mm²	8 x d
70 mm² and greater	10 x d

Bare Copper Earth Wire (SABS 1411 Part 1)		
Conductor Size	Nominal Stranding	Approx. Meters
mm²	No. x diameter	m/kg
1,5	7/0,53	71,19
2,5	7/0,66	42,44
4	7/0,85	27,04
6	7/1,04	18,20
10	7/1,35	10,56
16	7/1,67	6,91
25	19/1,38*	4,33
35	19/1,62*	3,13
50	19/1,88*	2,20
70	19/2,28*	1,58
95	19/2,50	1,19
120	37/2,03	0,91
150	37/2,28	0,73
185	37/2,50	0,62
240	37/2,98	0,46

* Compacted conductors

Packaging: 1,5mm² - 6mm² 5kg & 25kg coils
10mm² - 16mm² 25kg & 500kg wooden drums
25mm² - 240mm² 500kg wooden drums

Example: Customer requires : 180m of 70mm² Copper Earth Wire. 1kg of 70mm² Copper is therefore = 1,58m. So 180m divided by 1,58 = 113,92kg say 114kg

FLAMOSAFE RANGE OF FIRE PERFORMANCE OF ELECTRIC CABLES

FR (Flame Retardant) Red and Orange Stripe cables are designed to reduce the spread of fire along a cable tray or duct. However, when these cables burn, they give off large quantities of toxic gases and smoke. **(FYRGARD®)**

LHFR (Low Halogen) Blue Stripe cables has specially formulated PVC that reduces the emission of hydrochloric acid during burning of the cables. **(LOHAL®)**

NHLSFR (Non Halogen) White Stripe cables are designed to reduce flame propagation and smoke in those instances where a fire may develop. By replacing the standard PVC with XLPE insulation and EVA bedding and outer sheath, no HCl gases will be liberated during the burning of the cables. **(LOTOX®)**

Fire Survival cables essentially are very similar to LOTOX cables but contain in additional a glass/mica tape, wrapped around each conductor, to prevent short circuits during a fire situation. The cables allow continuity of operation of vital circuits, and are designed to survive exposure to a temperature of 950°C for a period of three hours. **(FYRSURE®)**