



PROTEA CABLES

CABLE CATALOGUE



PROTEA CABLES

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PROTEA CABLES

CABLE DATA SCHEDULE

SIZES		DIAMETERS	WEIGHT	CURRENT RATINGS				BARE COPPER WEIGHT	GLANDS
Core Area (mm ²)	Number of Cores	Calculated Overall Cable Diameter (mm) (Approximate)	Per Metre Mass (Kg) (Approximate)	Current Ratings for Armoured PVC Cables Rating for Solitary Cable (Amps..AC) Copper and Aluminium Conductors				Circular Copper Conductors Single Wires Nominal Mass (Kg) per metre (Approximate)	Gland Size
				In Ground		In Air 30°C			
				Twin CU/AL	Multicore CU/AL	Twin CU/AL	Multicore CU/AL		
1,5	2	12,9	0.27	27	23	21	19	0.0139	Oorl
	3	13,4	0.45						Oorl
	4	14,2	0.50	Oorl					
	7	17,7	0.62	Oorl					
2,5	2	14,3	0.31	36	31	30	25	0.0233	Oorl
	3	15,8	0.52						Oorl
	4	16,8	0.59						Oorl
	7	20,0	0.76						1
4	2	16,2	0.38	48	40	39	33	0.0368	Oorl
	3	17,0	0.67						Oorl
	4	18,3	0.76						1
	7	21,5	0.99						2
6	2	17,4	0.46	59	51	50	43	0.0552	1
	3	18,4	0.79						1
	4	19,7	0.91						1
10	2	19,4	0.83	79	68	69	58	0.0920	1
	3	20,4	0.99						1
	4	22,6	1.2						2
16	2	22,2	1.1	105	88	90	77	0.1472	2
	3	24,4	1.3						2
	4	26,1	1.8						3
25	3	25,4	1.8	135/105	115/87	120/90	100/78	0.230	2
	4	27,7	2.2						3
35	3	27,3	2.2	165/125	140/105	150/110	125/93	0.322	3
	4	31,2	2.7						3 or 4
50	3	31,9	2.9	195/150	165/125	175/130	155/110	0.465	3
	4	36,3	3.9						3 or 4
70	3	35,0	3.6	245/180	200/155	220/165	190/145	0.644	4
	4	39,0	4.8						4 or 5
95	3	39,5	4.9	290/210	245/185	270/195	230/175	0.877	4
	4	43,9	6.1						5
120	3	42,2	5.7	330	280/210	310	270/205	1.109	5
	4	48,6	7.3						5
150	3	45,5	6.9	370	310/240	355	310/235	1.386	5
	4	52,6	9.3						5 or 6
185	3	51,0	8.7	420	350/270	410	355/270	1.710	5 or 6
	4	57,1	11.0						6
240	3	57,5	10.8	485	410/315	485	420/320	2.218	6
	4	63,5	13.7						7
300	3	65,3	13.0	540	460/355	550	475/365	2.773	6
	4	72,5	16.5						7 or 8



PROTEA CABLES

AQUAVERN - 3 & 4 CORE SUBMERSIBLE PVC FLEXIBLE PUMP CABLE

Construction

High conductivity bunched flexible copper conductors, insulated and colour coded with general purpose waterproof flexible PVC. Insulated cores are twisted together and filled with PVC to give the cable a round finish. Final protection is with a tightly bonded waterproof, flexible PVC sheath.

Application

PVC is superior to rubber in a waterproof submersible cable, therefore this cable can be used for supplying power to all types of indoor and outdoor, mobile, portable and fixed pumping equipment. This cable is used as a cost effective alternative to rubber insulated cables for boreholes, drainage, dewatering, cleaning and irrigation pumping equipment. It is used on farms and in mines, dockyards, municipalities, construction operations, railways, roadworks and factories.



Specification	(SABS 1574)
Voltage Rating	600/1000 Volts
Test Voltage	3000 Volts
Current Capacity AC	As per table below
Temperature range	-10° to +80°C
Flexibility Class	4 & 5
Conductor Type	High conductivity annealed copper
Insulation Material	Flexible grade waterproof PVC
Sheath Material	Flexible grade waterproof PVC
Sheath Colours	3 core - Blue, 4 core - Green
Core Colours	3 core - Red, Yellow, Blue 4 core - Red, Yellow, Blue, Black

TECHNICAL DATA							
Size mm ²	Stranding No x Dia	600/1000V Cubicle Wiring Amp		mV drop Amp / mtr		Nominal Dia	Mass Kg/100m
		1ph 220V	3ph 380V	1ph 220V	3ph 380V		
1.5 (3C)	28 x 0.26	16	15	29	25	10.1	14.96
2.5 (3C)	44 x 0.26	23	20	18	15	11.1	19.30
4.0 (3C)	49 x 0.31	30	27	11	9.5	13.0	27.65
6.0 (3C)	74 x 0.31	38	34	7.3	6.4	14.7	37.82
10.0 (3C)	126 x 0.31	52	46	4.4	3.8	16.9	55.77
16.0 (3C)	200 x 0.31	69	62	2.8	2.4	18.9	76.38
1.5 (4C)	28 x 0.26	16	15	29	25	10.9	17.70
2.5 (4C)	44 x 0.26	23	20	18	15	12.0	23.12
4.0 (4C)	49 x 0.31	30	27	11	9.5	14.2	34.10
6.0 (4C)	72 x 0.31	38	34	7.3	6.4	16.0	46.00
10.0 (4C)	126 x 0.31	52	46	4.4	3.8	18.5	68.67
16.0 (4C)	200 x 0.31	69	62	2.8	2.4	20.7	94.87

PACKAGING: Available in 500 metre drum lengths. Cut lengths are also available on request.

This product is sequentially marked at one metre intervals for your convenience and security.



PROTEA CABLES

CABTYRE - FLEXIBLE CABLES OR CORDS

Construction

High conductivity bunched copper conductors, insulated and colour coded with general purpose flexible grade PVC. Cores are then twisted together for maximum flexibility and sheathed with soft flexible grade PVC in a circular configuration.

Application

For supplying mains power to all types of electrical, domestic and industrial appliances and equipment such as refrigerators, washing machines, glass cutters, hand tools, polishers, kitchen appliances, woodworking equipment/machinery, hobby and garden tools, extension leads etc. The sheath is made of flame retardant, water and oil resistant flexible grade PVC.



Specification	(SABS 1574)
Voltage Rating	As per table below
Test Voltage	2000/3000 Volts
Current Capacity AC	As per table below
Temperature range	-10° to +80°C
Flexibility Class	5
Conductor Type	High conductivity annealed copper
Insulation Material	General purpose flexible grade PVC
Sheath Material	General purpose flexible grade PVC
Sheath Colours	Black, Grey and White. 5 & 7 Cores Black and White
Core Colours	2 core - Blue, Brown
	3 core - Blue, Brown, Green/Yellow
	4 core - Blue, Brown, Black, Green/Yellow
	5 core - Violet, Brown, Black, Blue, Green/Yellow
	7 core - Black, Violet, Pink, Orange, Green/Yellow, Blue, Brown

TECHNICAL DATA														
Size mm ²	Nominal Amps		Voltage Rating	Duty	Nominal					Mass				
	1PH 220V	3PH 380V			Dia as/No. of Cores					Kg/100m as/No. of Cores				
					2C	3C	4C	5C	7C	2C	3C	4C	5C	7C
0.50	3	3	300/500	L/D	5.0	5.3	5.8	-	-	3.60	4.30	5.18	-	-
0.75	6	6	300/500	L/D	5.4	5.8	6.3	8.0	8.7	4.41	5.34	6.48	9.67	11.98
1.00	13	11	300/500	N/D	6.6	7.0	7.8	8.5	9.3	6.33	7.61	9.54	11.55	14.30
1.50	16	15	300/500	N/D	7.5	8.2	9.2	10.2	11.1	8.60	10.81	13.59	16.89	21.34
2.50	23	20	600/1000	HD	9.2	10.0	10.9	12.1	13.2	13.45	16.45	20.29	25.58	32.13
4.00	30	27	300/500	N/D	10.7	11.3	12.4	14.0	15.2	18.8	23.09	28.58	36.14	45.67

PACKAGING: Available in 100 metre shrink-wrapped coils. 1000 meter drums available on request.



PROTEA CABLES

FLEX-O-POWER - FLEXIBLE WELDING & POWER CABLE

Construction

High conductivity bunched flexible annealed copper conductors, insulated with soft flexible grade PVC suitable for welding and power purposes only.

Application

FLEX-O-POWER is manufactured with a flexible grade PVC, which makes it a user-friendly flexible welding and power cable. FLEX-O-POWER can be used on all types of indoor and outdoor electric welding and power equipment.



Specification	(SABS 1574 as a guide)
Voltage Rating	1000 Volts
Test Voltage	2000 Volts
Current Capacity AC	As per appendix 2
Temperature range	-10° to +80°C
Flexibility Class	4 & 5
Conductor Type	High conductivity annealed copper
Insulation Material	Soft flexible grade PVC
Colour Options	Refer to table below

TECHNICAL DATA

Size mm ²	Stranding No x Dia	Nominal Dia	Sheath Colour	600/1000V Cubicle Wiring Amp		Mass Kg/100m
				1ph 220V	3ph 380V	
12	230 x 0.26	8.1	Black	65	60	16.40
16	120 x 0.41	8.7	Green	76	68	20.10
35	252 x 0.41	11.0	Grey	125	110	39.28
50	366 x 0.41	13.4	Red	151	134	54.94
70	342 x 0.501	15.4	Brown	192	171	76.00

PACKAGING: Available in 100 metre shrink-wrapped coils, and 500 metre drums. Cut lengths are available on request



PROTEA CABLES

FTE - FLAT SURFACE WIRING CABLES (FLAT TWIN AND EARTH)

Construction

High conductivity solid or stranded plain annealed copper conductors, insulated and colour coded with general purpose grade PVC. These insulated cores plus a bare copper earth wire are sheathed with flexible grade PVC in a flat parallel configuration.

Application

FTE is for direct installation without further protection in roofs, floors and under plaster in houses, offices and buildings. It's neat, low profile also allows for surface installation. As FTE is manufactured to SABS 1507, it is approved by municipalities and other major utility companies and is also used by electrical contractors and electricians.



Specification	(SABS 1507-2)
Voltage Rating	300/500 Volts
Test Voltage	2250 Volts
Current Capacity AC	As per table below
Temperature range	-10° to +80°C
Flexibility Class	1 & 2
Conductor Type	High conductivity annealed copper
Insulation Material	General purpose grade PVC
Sheath Material	Flexible grade PVC
Sheath Colours	White & Black
Core Colour (Twin and Earth)	Red, Black and Bare copper earth

TECHNICAL DATA					
Size mm ²	No. of Cores	Earth mm ²	Nominal Amps	Nominal Breadth & Height	Mass Kg/100m
1.0	2	+1.0	14	7.6 x 4.1	6.35
1.5	2	+1.0	22	8.5 x 4.6	8.16
2.5	2	+1.5	30	10.1 x 5.4	11.93
4.0	2	+1.5	40	11.9 x 6.4	17.50
6.0	2	+2.5	51	13.4 x 6.9	23.54

PACKAGING: Available in 100 metre shrink-wrapped coils, 1000 metre drums available on request.



PROTEA CABLES

GENERAL PURPOSE HOUSE WIRE

Construction

High conductivity annealed stranded copper conductors, insulated with general purpose grade PVC in plain colours.

Application

For the wiring of all types of control panels, buildings, factories, relay racks etc. General purpose house wire is used by electrical contractors, electricians, municipalities and all major switchboard manufacturers.



Specification	(SABS 1507-2)
Voltage Rating	600/100 Volts
Test Voltage	3000 Volts
Current Capacity AC	As per table below
Temperature range	-10° to +80°C
Flexibility Class	1 & 2
Conductor Type	High conductivity annealed copper
Insulation Material	General purpose grade PVC
Colour Options	Blue, Black, Red, Violet, Green/Yellow, White, Orange, Pink, Grey, Brown and Yellow

TECHNICAL DATA					
Size mm ²	Stranding No x Dia	Nominal Dia	600/1000V Cubicle Wiring Amp Ratings		Mass Kg/100m
			1ph 220V	3ph 380V	
1.5	7 x 0.53	3.1	18	16	2.38
2.5	7 x 0.67	3.6	24	21	3.43
4.0	7 x 0.86	4.6	32	28	5.67
6.0	7 x 1.06	5.1	41	36	7.82
10.0	7 x 1.37	6.1	57	50	12.24
16.0	7 x 1.72	7.1	76	68	18.46
25.0	19 x 1.38	8.4	101	89	25.60
35.0	19 x 1.62	9.5	125	110	34.70
50.0	19 x 1.88	11.3	151	134	47.20
70.0	19 x 2.28	12.6	192	171	66.10
95.0	19 x 2.50	15.8	232	207	97.60

PACKAGING: Available in 100 metre shrink-wrapped coils.



PROTEA CABLES

PANEL FLEX - SINGLE CORE MULTI STRANDED PANEL FLEX

Construction

High conductivity bunched plain annealed flexible copper conductors, insulated with general purpose grade PVC in all colours. Insulation is water, oil and abrasion resistant.

Application

For the wiring of all types of control panels, light fittings, appliances, communication panels, signalling relay racks as well as many other applications. Manufactured to SABS 1574, these products are used by public transport services, municipalities, Telkom, Eskom, major switchgear companies, electrical contractors and electricians.



Specification	(SABS 1574)
Voltage Rating	300/500 Volts (0.5) 600/1000 Volts (0.75 - 120.0)
Test Voltage	5000/6000 Volts
Current Capacity AC	As per table below
Temperature range	-10° to +80°C
Flexibility Class	4 & 5
Conductor Type	High conductivity annealed copper
Insulation Material	Flexible grade PVC
Colour Options	Blue, Black, Brown, Yellow, Green/Yellow, Orange, Pink, Violet, Grey, White, Red and Green

TECHNICAL DATA				
Size mm ²	Stranding No x Dia	Nominal Dia	Nominal Amps	Mass Kg/100m
0.5	14 x 0.21	2.1	3	0.89
0.75	21 x 0.21	2.7	6	1.39
1.0	28 x 0.21	2.9	13.5	1.67
1.5	42 x 0.21	3.2	17	2.21
2.5	44 x 0.26	3.6	24	3.10
4.0	48 x 0.31	4.5	32	5.05
6.0	72 x 0.31	5.1	41	7.02
10.0	128 x 0.31	6.1	57	11.53
16.0	200 x 0.31	7.3	76	17.53
25.0	306 x 0.31	9.2	101	28.12
35.0	440 x 0.31	9.8	125	36.74
50.0	632 x 0.31	12.4	151	53.82
70.0	904 x 0.31	14	192	73.87
95.0	678 x 0.41	16.3	232	99.09
120.0	864 x 0.41	18.4	269	123.53

PACKAGING: Available in 100 metre shrink-wrapped coils.



PROTEA CABLES

PERMOPOWER - SINGLE CORE FLEXIBLE POWER CABLE

Construction

High conductivity bunched flexible copper conductors with primary insulation of general purpose grade PVC and tightly bonded water and oil resistant PVC/rubber blend nitrile sheath.

Application

PERMOPOWER is manufactured to SABS 1507 specification, is flexible, and rated at 1000volts. It can be used on all types of indoor and outdoor panel and power equipment. PERMOPOWER is an excellent replacement for large, rigid type stranded house wires, and is quick to install in ducts, shafts, switchboards, trunking, conduits, transformer connections, large borehole pumps and many types of wiring applications in confined spaces.



Specification	(SABS 1507)
Voltage Rating	1000 Volts
Test Voltage	6000 Volts
Current Capacity AC	As per table below
Temperature range	-10° to +80° C
Flexibility Class	4 & 5
Conductor Type	High conductivity annealed copper
Sheath Material	PVC/Rubber blend nitrile
Colour Options	Blue, Black, Green/Yellow, Red (Standard Welding Colours and Phase Colours)

TECHNICAL DATA					
Size mm ²	Stranding No x Dia	Nominal Dia	600/1000V Cubicle Wiring Amp Ratings		Mass Kg/100m
			1ph 220V	3ph 380V	
16	120 x 0.41	9.4	76	68	21.90
25	180 x 0.41	10.4	101	89	30.33
35	252 x 0.41	11.8	125	10	41.44
50	366 x 0.41	14.4	151	134	59.88
70	516 x 0.41	17.1	192	171	83.00
95	456 x 0.501	18.6	232	207	107.06
120	582 x 0.501	21.3	269	239	136.92
150	762 x 0.501	24.7	300	262	179.32
185	924 x 0.501	26.8	341	296	220.10

PACKAGING:

Available in 500 metre drum lengths. Cut lengths are also available on request.
This product is sequentially marked at one metre intervals for your convenience and security.



PROTEA CABLES

PERMOTRAIL - 4 CORE TRAILING CABLE

Construction

High conductivity bunched flexible copper conductors, insulated and colour coded with general purpose flexible grade PVC. Insulated cores are twisted and filled with PVC to give the cable a round finish. Final protection is with a tightly bonded, water, oil and abrasion resistant PVC/rubber blend nitrile sheath.

Application

The supply of power to all types of indoor and outdoor mobile and portable machinery in wet, oily, all weather conditions. Used on building and construction sites, in workshops, mines, dockyards, opencast mining operations, railways, road works and factories.



Specification	(SABS 1507)
Voltage Rating	600/1000 Volts
Test Voltage	3000 Volts
Current Capacity AC	As per table below
Temperature range	-10° to +80°C
Flexibility Class	4 & 5
Conductor Type	High conductivity annealed copper
Insulation Material	Flexible grade PVC
Sheath Material	PVC/Rubber Blend Nitrile
Sheath Colours	Orange
Core Colours	Red, Yellow, Blue, Black
Bending Radius	8 x Diameter of cable

TECHNICAL DATA						
Size mm ²	Stranding No x Dia	Nominal Amps	mV drop Amp / mtr		Nominal Dia	Mass Kg/100m
			1ph 220V	3ph 380V		
1.5	28 x 0.26	15	29	25	10.9	17.38
2.5	44 x 0.26	20	18	15	12.0	22.79
4.0	49 x 0.31	27	11	9,5	14,7	34.80
6.0	74 x 0.31	34	7.3	6.4	16.1	45.28
10.0	126 x 0.31	46	4.4	3.8	19.1	69.80
16.0	200 x 0.31	62	2.8	2.4	21.3	96.10
25.0	180 x 0.41	80	1.75	1.5	26.3	147.30
35.0	252 x 0.41	99	1.25	1.1	31.7	213.10

PACKAGING: Available in 500 metre drum lengths. Cut lengths are also available on request.
This product is sequentially marked at one metre intervals for your convenience and security.



PROTEA CABLES

SURFIX - CIRCULAR SURFACE WIRING CABLES

Construction

High conductivity solid or stranded plain annealed copper conductors, insulated and colour coded with hard grade PVC, covered in aluminium/PVC laminate foil in contact with the tinned earth wire and bonded to a sheath of hard grade PVC finished in a circular configuration.

Application

SURFIX is for direct installation without further protection on walls, in roofs, floors and under plaster in houses and offices. It's neat appearance allows for surface installation. As SURFIX is manufactured to SABS 1507, it is approved by municipalities and other major utility companies and is also used by electrical contractors and electricians.



Specification	(SABS 1507-2)
Voltage Rating	300/500 Volts
Test Voltage	2250 Volts
Current Capacity AC	As per table below
Temperature range	-10° to +80°C
Minimum Bending Radius	15 x Cable Diameter
Protection	Aluminium Foil
Flexibility Class	1 & 2
Conductor Type	High conductivity annealed copper
Insulation Material	Hard grade abrasion resistant PVC
Sheath Material	Hard grade abrasion resistant PVC
Sheath Colours	White & Black
Core Colours	2 core - Red and Black, Tinned earth wire
	3 core - Red, Yellow and Blue, Tinned earth wire
	4 core - Red, Yellow, Blue and Black, Tinned earth wire

TECHNICAL DATA					
Size mm ²	No. of Cores	Earth mm ²	Nominal Amps	Nominal Dia	Mass Kg/100m
1.5	2 + E	1.0	22	7.1	8.29
1.5	3 + E	1.0	19	7.8	10.49
1.5	4 + E	1.0	19	8.5	13.00
2.5	2 + E	1.5	30	8.5	11.76
2.5	3 + E	1.5	25	9.0	15.13
2.5	4 + E	1.5	25	9.9	18.91
4.0	2 + E	1.5	40	10.2	17.20
4.0	3 + E	1.5	34	10.9	22.72
4.0	4 + E	1.5	34	11.9	28.61
6.0	2 + E	2.5	51	11.3	25.83
6.0	3 + E	2.5	43	12.1	31.13
6.0	4 + E	2.5	43	13.3	39.24

PACKAGING: Available in 100 metre shrink-wrapped coils, 1000 metre drums available on request.



PROTEA CABLES

XLPE/PVC - 4 CORE TRAILING CABLE

Construction

High conductivity bunched, flexible copper conductors, insulated and colour coded with XLPE. Insulated and twisted and filled with PVC to give the cable a round finish. Final protection is with a tightly bonded, water, oil and abrasion resistant PVC.

Application

The supply of power to all types of indoor and outdoor mobile and portable machinery in wet, oily, all weather conditions. Used on building and construction sites, in workshops, mines, dockyards, opencast mining, road works and factories.



Specification	(SABS 1507-4 as a guide)
Voltage Rating	600/1000 Volts
Test Voltage	3000 Volts
Current Capacity AC	As per table below
Temperature range	-10° to +90°C
Flexibility Class	4 & 5
Conductor Type	High conductivity annealed copper
Insulation Material	XLPE
Sheath Material	Flexible grade PVC
Sheath Colours	Black
Core Colours	Red, Yellow, Blue, Black

TECHNICAL DATA							
Size mm ²	Stranding No x Dia	Nominal Amps		mV drop Amps / m		Nominal Dia	Mass Kg/100m
		1ph 220V	3ph 380V	1ph 220V	3ph 380V		
1.5	27 x 0.26	25	23	29	25	10.9	16.55
2.5	44 x 0.26	35	32	28	15	11.9	21.73
4.0	49 x 0.31	45	42	11	9.5	13.4	29.56
6.0	74 x 0.31	59	54	7.3	6.4	15.25	40.68
10.0	130 x 0.31	81	75	4.4	3.8	18.0	64.15
16.0	200 x 0.31	108	100	2.8	2.4	20.2	89.61
25.0	312 x 0.31	137	127	1.7	1.5	25.3	139.93

PACKAGING: Available in 500 metre drum lengths. Cut lengths are also available on request.

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PROTEA CABLES

Protea Cables are stockists and distributors of electrical cables.

We are closely associated with the local manufacturers and are therefore able to offer a wide product range:

CABLING

- Airdac
- Bare Copper Earth Wire
- Cabtyre
- FTE (Flat Twin & Earth)
- House Wire
- Illumination
- Panel Flex - Power (16 to 185mm)
- Panel Flex (0.5mm to 16mm)
- Panel Solid
- Paper Insulated Cables (11KV)
- PVC SWA PVC (600/1000 Volt)
- Ripcord
- Silicone
- Submersible Pump Cable
- Surfix (Round)
- Trailing Cables (Nitrile Orange, XLPE, Rubber)
- XLPE Cables (11KV to 33KV)

OTHER PRODUCTS

- Conduit - PVC (20,25mm)
- Cable Joints (LT and HT)

FOR HIRE

- Cable Rollers
- Cable Jacks
- Hydraulic Crimping Tool

We look forward to your enquiries.