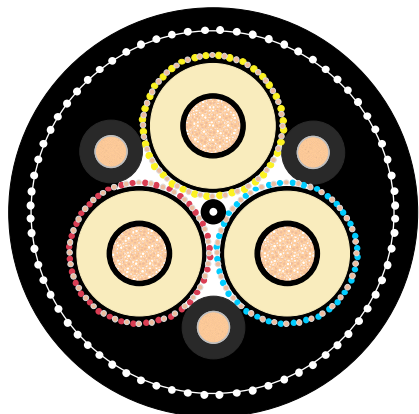


TYPE 622 12,7/22kV

POWERMITE

In line SANS 1520-2

Flexible copper screened mining cables



CONSTRUCTION	
Cable type	Type 622 12,7/22 kV to SANS 1520-2
Conductors	Flexible class 5 comply to SANS 1411 - 1 from tinned annealed copper wires , left hand with semi-conducting rubber screen .
Insulation	Ethylene propylene thermosetting compound type RD 3 comply to SANS 1411-3 and a strippable semi-conducting core screen (triple extruded)
Insulation screen	The braid of tinned copper wires .
Cable assembly	Three tinned copper/nylon braid screened power cores and three unscreened pilot cores one in each interstice laid up in the right hand lay around semi-conductive filler centre . (Alternatively ,one pilot can be replaced with a tinned ECC).
Internal sheath	Poly-chloroprene thermosetting compound type RS 6 comply to SANS 1411-3 .
Reinforcing braid	An open nylon braid . Minimum 16 of nylon strings .
Outer sheath	Poly-chloroprene thermosetting compound type RS 6 comply to SANS 1411-3 . Inner and outer sheath are bonded to provide proper torsional protection , black .
Physical Properties	As per Table 1.
Electrical Properties	As per Table 2.
Tests	SANS 1520-2 .
Marking	Legible and indelible embossing as per order. Standard marking : TF KABLE 3 Texoprene Type 622 (size) (Voltage) CR SANS 1520-2 (Year) + metre marking

FEATURES
<ul style="list-style-type: none"> ▪ Excellent flexibility . ▪ Abrasion , tear resistant and flame retardant . ▪ Temperature range : min. ambient temp . -25 °C , max. conductor temp. 90°C. ▪ UV ,sunlight , ozone ,oil, resistant .

APPLICATIONS
<ul style="list-style-type: none"> ▪ Electrically driven machines , movable electric apparatus in hazardous areas, portable electric apparatus . Section feeders . Open cast mining , medium sized draglines , shovels and drills. Suitable for reeling purposes. ▪ Other industrial applications .

In line SANS 1520-2

Standard length cable packing 500 m on drums. Other forms of packing and delivery are available on request

Table 1

Physical Properties								
Power cores								
Conductor sizes	(mm ²)	25	35	50	70	95	120	150
Maximum wire diameter	(mm)	0.41	0.41	0.41	0.51	0.51	0.51	0.51
Approx. conductor diameter	(mm)	6.8	8.5	10.3	11.9	13.5	15.5	17.3
Maximum screen wire diameter	(mm)	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Braided screen filling factor	(%)	60	60	60	60	60	60	60
Pilot cores								
Conductor sizes	(mm ²)	16	16	16	16	16	16	25
Maximum wire diameter	(mm)	0.41	0.41	0.41	0.41	0.41	0.41	0.41
Approx. conductor diameter	(mm)	4.2	4.2	4.2	4.2	4.2	4.2	6.8
Lay Ratio (maximum)	(x PCD)	20	20	20	20	20	20	20
Approximate cable diameter *	(mm)	60.6	64.9	68.5	72.4	77.1	81.4	85.6
Cable mass (approximate)								
Type 622	(kg/m)	5.5	6.4	7.2	8.3	9.6	11.0	12.6
Minimum bending radius	(mm)	540	580	610	640	670	710	780
Maximum recommended tension	(kN)	1.1	1.6	2.3	3.2	4.3	5.4	6.8

*Tolerance +/-5% of approx value

Table 2

Electrical Properties								
Maximum cond. DC resistance @ 20 ⁰ C (Ω/km)	0.795	0.565	0.393	0.277	0.210	0.164	0.132	
Maximum cond. DC resistance @ 90 ⁰ C (Ω/km)	1.05	0.749	0.521	0.368	0.279	0.218	0.176	
Reactance (Ω/km)	0.145	0.135	0.127	0.122	0.117	0.111	0.106	
Minimum combined screen resistance @ 23 ⁰ C (Ω/km)	1.6	1.2	0.8	0.7	0.6	0.6	0.6	
Minimum combined screen & ECC resistance (Ω/km)	0.7	0.5	0.5	0.4	0.3	0.23	0.18	
Sustained current rating @ 30 ⁰ C ambient								
Laid out straight (A)	105	130	160	195	230	260	300	
Short circuit rating :								
Symmetrical fault current (kA for 1 sec)	3.1	4.3	6.1	8.5	11.6	14.6	18.3	
Earth fault current (screens) (kA for 1 sec)	1.6	2.1	3.1	3.5	4.1	4.1	4.1	
Earth fault current ECC + screens) (kA for 1 sec)	3.6	5.0	5.0	7.5	9.0	11.5	14.0	

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