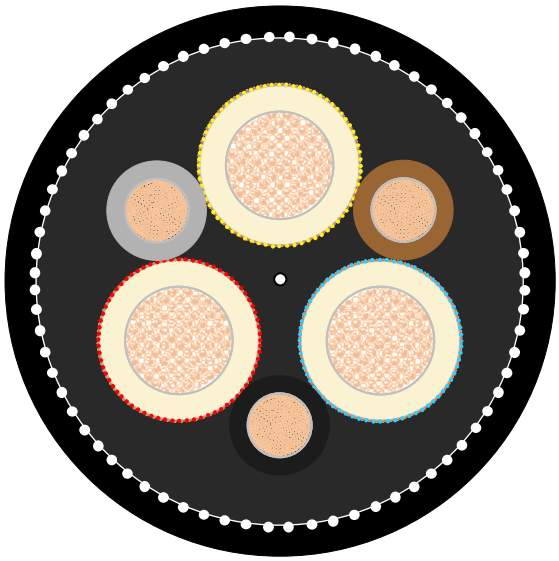
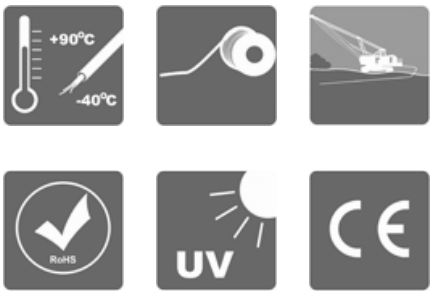
TYPE 61A 0,64/1,1kV

SANS 1520-1

POWERMITE

Flexible copper screened mining cables





CONSTRUCTION	
Cable type	Type 61A 0.64/1.1 kV
Conductors	Flexible class 5 comply to SANS 1411 - 1 from tinned annealed copper wires left lay 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)
Core of cable	Three tinned copper braided screened power cores and three unscreened pilot cores one in each interstice laid up in the right hand lay around semi-conductive cradle centre (only16 mm^2 around rubber (RD1) filler centre) .
Inner sheath	Poly-chloroprene thermosetting compound type RS 6 comply to SANS 1411-3 .
Re-enforcement	An open nylon braid **.** Minimum 16 of nylon strings .
Outer sheath	Poly-chloroprene thermosetting compound type RS 6 comply to SANS 1411-3 .
Colour of sheath	Black .
Tests	SANS 1520-1.
Marking	TF KABLE 3 Texoprene TR 61A (Size) (Voltage) CR SANS 1520-1 (Year)+metre marking

FEATURES

- Excellent flexibility
- Water resistant and flame retardant
- Operating temperature min. ambient temp . -25 ^{0}C , max. conductor temp. 90^{0}C.
- UV ,sunlight , ozone ,oil, resistant
- Embossing marking as per order.

APPLICATIONS

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- Electrically driven machines , movable electric apparatus in hazardous areas .Not for reeling purposes.
- Other industrial applications .

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

Table 1

Physical Properties								
Power cores								
Conductor sizes	(mm^2)	**16**	**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	0.51
Approx. conductor diameter	(mm)	5.3	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	0.31
Braided screen filling factor	(%)	80	80	80	80	80	80	80	80
Approx. summarized screen cross-section for power cores (weighing method)	(mm^2)	22	25	27	32	37	43	47	52
Pilot cores								
Conductor sizes	(mm^2)	10	10	16	16	16	16	16	16
Maximum wire diameter	(mm)	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
Approx. conductor diameter	(mm)	4.2	4.2	5.3	5.3	5.3	5.3	5.3	5.3
Lay Ratio (maximum)	(x PCD)	8	8	8	8	8	8	8	8
Cable diameter								
Approx.	(mm)	31	38	43	47	52	58	63	70
Cable mass (approx.)	(kg/m)	1.8	3.1	3.6	4.5	5.6	7.0	8.4	10.2
Minimum bending radius	(mm)	200	240	260	290	320	350	390	430
Maximum recommended tension	(kN)	0.7	1.1	1.6	2.3	3.2	4.3	5.4	6.8

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Table 2

Electrical Properties						
Power cores						
Maximum cond. DC resistance @ 20^{0}C (Ω/km)	0.576	0.401	0.283	0.214	0.167	0.135
Maximum cond. DC resistance @ 90^{0}C (Ω/km)	0.734	0.511	0.360	0.273	0.213	0.171
Reactance (Ω/km)	0.090	0.090	0.088	0.086	0.086	0.085
Impedance (Z) @ 90^{0}C (Ω/km)	0.740	0.519	0.371	0.287	0.230	0.191
Sustained current rating @ 30^{0}C ambient						
Laid out straight (A)	160	200	245	295	345	390
Short circuit rating :						
Symmetrical fault current (kA for 1 sec)	4.3	6.1	8.5	11.6	14.6	18.3
Earth fault current (screens) (kA for 1 sec)	2.1	3.1	3.5	4.1	4.1	4.1