



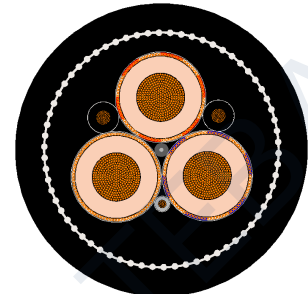
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrialcable

TYPE 451 CLASS 1 COMPOSITE SCREENED CABLE

3.3/3.3 kV to 33/33 kV reeling and trailing cable to AS/NZS 2802



APPLICATION

Class 1 composite screened power cores with two earth cores and one reduced-size pilot core. General purpose reeling cable similar to Type 450, for draglines, shovels, excavators, wharf cranes and materials handling equipment. Suitable for slow reeling and trailing applications.

CONSTRUCTION

Parameter	Value
Core	Tinned copper, three power cores plus two earth cores and one pilot core
Conductor barrier	Semiconductive barrier tape and elastomeric screen
Insulation	EPR XR-EP-90 semiconductive elastomer screened insulation
Screen	Composite tinned annealed copper wire and polyester yarn screen under semiconductive tape
Core colours	Red, white and blue with braid tracers
Earth	Two elastomer covered tinned annealed copper wire earths disposed in the cable interstices
Pilot	One reduced-size elastomer covered pilot disposed in the cable interstices
Sheath	Extra heavy duty XHD-85-PCP sheath incorporating polyaramid braid reinforcement

CABLE CHARACTERISTICS

Parameter	Value
Standard	AS/NZS 2802
Voltage range	3.3/3.3 kV to 33/33 kV
Maximum continuous operating temperature	+90 deg C
Minimum installation temperature	-25 deg C
Installation conditions	In free air for mobile equipment
Oil / water performance	Excellent immersion performance and very good flexibility
Flame performance	C1

TECHNICAL DATA

Complete nominal dimensional data. Source ordering codes have been omitted.

TYPE 451.3 - 3.3 kV - ELECTRICAL DATA

Part	Area mm ²	Nom. dia. mm	Insul. thick. mm	AC res. oh/km	React. oh/km	Volt drop mV/A.m	Cap. uF/km
25-451-3	25	7.2	2.2	0.951	0.118	1.66	0.395
35-451-3	35	8.4	2.2	0.698	0.113	1.22	0.437
50-451-3	50	9.7	2.4	0.523	0.109	0.925	0.450
70-451-3	70	12.0	2.4	0.346	0.103	0.625	0.525
95-451-3	95	13.3	2.4	0.271	0.0986	0.500	0.563
120-451-3	120	15.3	2.4	0.210	0.0947	0.399	0.628
150-451-3	150	17.2	2.4	0.166	0.0918	0.329	0.687

TYPE 451.3 - 3.3 kV - SCREEN, EARTH, PILOT AND MASS

Part	Screen area mm ² /phase	Earth area each mm ²	Pilot area mm ²	Sheath thick. mm	Nom. dia. mm	Approx mass kg/100m
25-451-3	7.9	8	9	4.8	46.7	360
35-451-3	8.5	8	9	5.1	49.7	415
50-451-3	9.3	12	9	5.6	54.5	510
70-451-3	14	18	9	6.0	60.5	655
95-451-3	15	25	9	6.3	63.9	755
120-451-3	16	31	13.2	6.4	68.4	890
150-451-3	17	39.5	13.2	6.6	72.8	1050

TYPE 451.6 - 6.6 kV - ELECTRICAL DATA

Part	Area mm ²	Nom. dia. mm	Insul. thick. mm	AC res. oh/km	React. oh/km	Volt drop mV/A.m	Cap. uF/km
25-451-6	25	7.2	3.0	0.951	0.124	1.66	0.309
35-451-6	35	8.4	3.0	0.698	0.118	1.23	0.340
50-451-6	50	9.7	3.0	0.523	0.113	0.927	0.375
70-451-6	70	12.0	3.0	0.346	0.106	0.627	0.435
95-451-6	95	13.3	3.0	0.271	0.102	0.502	0.465
120-451-6	120	15.3	3.0	0.210	0.0979	0.401	0.518
150-451-6	150	17.2	3.0	0.166	0.0948	0.331	0.566

TYPE 451.6 - 6.6 kV - SCREEN, EARTH, PILOT AND MASS

Part	Screen area mm ² /phase	Earth area each mm ²	Pilot area mm ²	Sheath thick. mm	Nom. dia. mm	Approx mass kg/100m
25-451-6	8.8	8	9	5.2	51.1	415
35-451-6	9.3	8	9	5.5	54.2	470
50-451-6	10	12	9	5.9	57.8	555
70-451-6	15	18	9	6.3	63.9	705
95-451-6	16	25	9	6.4	66.8	800
120-451-6	17	31	13.2	6.5	71.4	940
150-451-6	18	39.5	13.2	6.6	75.5	1100

TECHNICAL DATA

Complete nominal dimensional data. Source ordering codes have been omitted.

TYPE 451.11 - 11 kV - ELECTRICAL DATA							
Part	Area mm2	Nom. dia. mm	Insul. thick. mm	AC res. oh/km	React. oh/km	Volt drop mV/A.m	Cap. uF/km
25-451-11	25	7.2	5.0	0.951	0.136	1.66	0.217
35-451-11	35	8.4	5.0	0.698	0.129	1.23	0.236
50-451-11	50	9.7	5.0	0.523	0.123	0.931	0.258
70-451-11	70	12.0	5.0	0.346	0.115	0.632	0.296
95-451-11	95	13.3	5.0	0.271	0.111	0.507	0.317
120-451-11	120	15.3	5.0	0.210	0.107	0.408	0.350
150-451-11	150	17.2	5.0	0.166	0.103	0.338	0.381

TYPE 451.11 - 11 kV - SCREEN, EARTH, PILOT AND MASS						
Part	Screen area mm2/phase	Earth area each mm2	Pilot area mm2	Sheath thick. mm	Nom. dia. mm	Approx mass kg/100m
25-451-11	14	8	13.2	6.3	62.3	570
35-451-11	15	8	13.2	6.4	65.0	630
50-451-11	16	12	13.2	6.5	68.1	715
70-451-11	17	18	13.2	6.6	73.1	850
95-451-11	18	25	13.2	6.7	76.1	955
120-451-11	20	31	13.2	6.9	80.7	1105
150-451-11	26	39.5	13.2	7.0	85.2	1295

TYPE 451.22 - 22 kV - ELECTRICAL DATA							
Part	Area mm2	Nom. dia. mm	Insul. thick. mm	AC res. oh/km	React. oh/km	Volt drop mV/A.m	Cap. uF/km
35-451-22	35	8.4	7.6	0.698	0.142	1.23	0.178
50-451-22	50	9.7	7.6	0.523	0.135	0.936	0.194
70-451-22	70	12.0	7.6	0.346	0.127	0.638	0.219
95-451-22	95	13.3	7.6	0.271	0.122	0.515	0.234
120-451-22	120	15.3	7.6	0.210	0.117	0.416	0.256
150-451-22	150	17.2	7.6	0.165	0.113	0.346	0.276

TYPE 451.22 - 22 kV - SCREEN, EARTH, PILOT AND MASS						
Part	Screen area mm2/phase	Earth area each mm2	Pilot area mm2	Sheath thick. mm	Nom. dia. mm	Approx mass kg/100m
35-451-22	19	8	13.2	6.8	77.2	840
50-451-22	20	12	13.2	6.9	80.2	930
70-451-22	27	18	13.2	7.0	85.6	1100
95-451-22	27	25	13.2	7.2	88.9	1220
120-451-22	29	31	13.2	7.3	93.4	1380
150-451-22	31	39.5	13.2	7.4	97.5	1560

Note: 33 kV available on request.

CERTIFICATIONS

