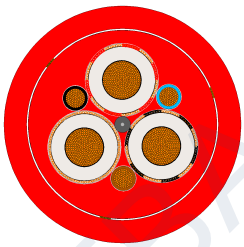
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrialcable

(N)TSCGECECWÖU

3.6/6 kV and 6/10 kV reeling cable



APPLICATION

Flexible cable suitable for reeling drums of tunnel boring machines and general tunnel applications. Suitable for indoor and outdoor applications in demanding mining and industrial environments.

CONSTRUCTION

Component	Description
Phase conductor	Class 5 tinned copper conductor
Insulation	Rubber compound Type 3GI3
Semi-conductive layers	Semi-conductive tape over the conductor, plus inner and outer semi-conductive rubber layers on the insulation
Protective earth conductor	Individual copper wire screen
Control conductor	Class 5 tinned copper conductor
Central filler	Semi-conductive compound on a textile polyester support
Inner sheath	Rubber compound Type 5GM5
Monitoring conductor	Copper wire screen over the inner sheath
Outer sheath	Rubber compound Type 5GM5
Sheath colour	Red

CHARACTERISTICS

- Flexible reeling cable for tunnel boring machines.
- Suitable for indoor and outdoor applications.
- Flame retardant according to IEC/EN 60332-1-2.
- Maximum torsional stress ±25°/m.

OPERATING CHARACTERISTICS

Parameter	Value
Voltage rating Uo/U	3.6/6 kV; 6/10 kV
Test voltage	11 kV for 3.6/6 kV; 17 kV for 6/10 kV
Ambient temperature	Fixed -40 °C to +90 °C; flexed -25 °C to +90 °C
Maximum short circuit temperature	+250 °C
Minimum bending radius	6 x overall diameter fixed; 10 x overall diameter flexed
Maximum torsional stress	±25°/m

STANDARDS

Parameter	Value
Cable standards	VDE 0250 Part 813, VDE 0295, EN 60228
Flame retardant	IEC/EN 60332-1-2
Regulatory compliance	RoHS Directive ; REACH EC

PACKING

Standard length cable packing on drums; other packing and delivery forms available on request.

TECHNICAL DATA

DIMENSIONS

Values are technical parameters only. Cable dimensions may vary due to manufacturing tolerances.

Voltage kV	Cores	Phase mm2	Earth mm2	Control mm2	Cond. dia. mm	Min OD mm	Max OD mm	Tensile N	Weight kg/km
3.6/6	3+3+3+ÜL	25	25/3E	2.5ST	6.8	45.4	48.8	1125	3010
3.6/6	3+3+3+ÜL	35	25/3E	2.5ST	7.8	46.9	50.4	1575	3390
3.6/6	3+3+3+ÜL	50	25/3E	2.5ST	9.4	50	53.6	2250	4050
3.6/6	3+3+3+ÜL	70	35/3E	2.5ST	11.2	55.6	59.4	3150	5260
3.6/6	3+3+3+ÜL	95	50/3E	2.5ST	12.7	59.9	63.9	4275	6460
3.6/6	3+3+3+ÜL	120	70/3E	2.5ST	14.4	64	68.4	5400	7820
3.6/6	3+3+3+ÜL	150	70/3E	2.5ST	16.3	70.4	75	6750	9430
6/10	3+3+3+ÜL	25	25/3E	2.5ST	6.8	45.4	49.4	1125	3050
6/10	3+3+3+ÜL	35	25/3E	2.5ST	7.8	46.9	51	1575	3430
6/10	3+3+3+ÜL	50	25/3E	2.5ST	9.4	50	54.2	2250	4090
6/10	3+3+3+ÜL	70	35/3E	2.5ST	11.2	55.6	60	3150	5300
6/10	3+3+3+ÜL	95	50/3E	2.5ST	12.7	59.9	64.5	4275	6500
6/10	3+3+3+ÜL	120	70/3E	2.5ST	14.4	64	69.1	5400	7860
6/10	3+3+3+ÜL	150	70/3E	2.5ST	16.3	70.4	75.7	6750	9470

CURRENT CARRYING CAPACITY

Area mm2	Floor A	Air A	1 layer	2 layer	3 layer	4 layer	5 layer	6 layer	7 layer
25	131	138	105	80	64	55	50	35	29
35	162	170	130	99	79	68	62	44	36
50	202	212	162	123	99	85	77	55	44
70	250	263	200	153	123	105	95	68	55
95	301	316	241	184	147	126	114	81	66
120	352	370	282	215	172	148	134	95	77
150	404	424	323	246	198	170	154	109	89

Ambient temperature of 30 °C.

TECHNICAL DATA

VOLTAGE DROP

Area mm2	PF 0.7	PF 0.8	PF 0.9	PF 1.0
25	1.29	1.45	1.6	1.71
35	0.95	1.06	1.16	1.23
50	0.69	0.77	0.83	0.87
70	0.51	0.56	0.6	0.61
95	0.41	0.45	0.47	0.47
120	0.34	0.36	0.38	0.36
150	0.29	0.31	0.32	0.29

DE-RATING FACTORS

Ambient temp.	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C
De-rating factor	1.15	1.12	1.08	1.04	1.00	0.96	0.91	0.87	0.82	0.76	0.71	0.65	0.58	0.50	0.41

NOTES

- Current carrying capacity values are stated for the operating conditions shown above.
- Cable dimensions may vary due to manufacturing tolerances.

CERTIFICATIONS