



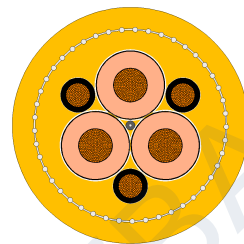
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrial cable

(N)TSCGEWÖU-ZH

3.6/6 kV and 6/10 kV halogen-free reeling cable



APPLICATION

Flexible cable for the energy supply to heavy mobile equipment such as draglines, shovels, dredges, drills and other moving machinery operating under extreme mechanical stress and abrasion in opencast mines. Halogen-free polyurethane sheathed version suitable for indoor and outdoor applications.

CONSTRUCTION

Component	Description
Phase conductor	Class 5 tinned copper conductor
Insulation	Rubber compound
Semi-conductive layers	Semi-conductive tape over the conductor, plus inner and outer semi-conductive rubber layers on the insulation
Earth conductor	Class 5 tinned copper conductor
Central filler	Semi-conductive compound on a textile polyester support
Inner sheath	Halogen-free polyurethane
Anti-Torsion Braid	Polyester braid between the inner and outer sheath
Outer sheath	Halogen-free polyurethane
Sheath colour	Yellow

CHARACTERISTICS

- Halogen-free medium-voltage trailing and reeling cable for opencast mining equipment.
- Maximum torsional stress of +/-25 degrees per metre.
- Flame retardant according to IEC/EN 60332-1-2.
- Halogen-free polyurethane sheath for demanding operating conditions.

OPERATING CHARACTERISTICS

Parameter	Value
Voltage rating U ₀ /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 -50 °C to +90 °C; flexed -25 °C to +90 °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, HD 22.16, VDE 0295, EN 60228
Flame retardant	IEC/EN 60332-1-2
Halogen free	IEC/EN 60754-1/2
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	Cond. dia. mm	Min OD mm	Max OD mm	Tensile N	Weight kg/km
3.6/6	3+3	25	25/3E	6.8	37.4	38.6	1500	2280
3.6/6	3+3	35	25/3E	7.8	39.0	40.2	2100	2630
3.6/6	3+3	50	25/3E	9.4	42.0	43.7	3000	3230
3.6/6	3+3	70	35/3E	11.2	45.8	47.5	4200	4160
3.6/6	3+3	95	50/3E	12.7	50.0	51.8	5700	5080
3.6/6	3+3	120	70/3E	14.4	53.8	55.6	7200	6280
3.6/6	3+3	150	70/3E	16.3	59.3	61.1	9000	7570
3.6/6	3+3	185	95/3E	17.6	61.1	63.4	11100	8740
6/10	3+3	25	25/3E	6.8	37.4	39.2	1500	2320
6/10	3+3	35	25/3E	7.8	39.0	40.8	2100	2670
6/10	3+3	50	25/3E	9.4	42.0	44.3	3000	3270
6/10	3+3	70	35/3E	11.2	45.8	48.1	4200	4200
6/10	3+3	95	50/3E	12.7	50.0	52.4	5700	5120
6/10	3+3	120	70/3E	14.4	53.8	56.3	7200	6320
6/10	3+3	150	70/3E	16.3	59.3	61.8	9000	7610
6/10	3+3	185	95/3E	17.6	61.1	64.1	11100	8780

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
185	461	484	369	281	226	194	175	124	101

Ambient temperature of 30 °C.

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
185	0.25	0.27	0.27	0.24

ELECTRICAL DATA

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



TEBAOFLEX CABLE