



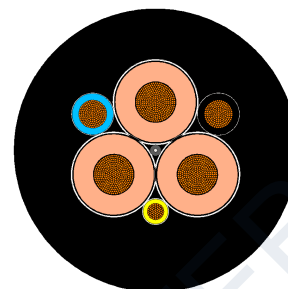
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrial cable

NTSCGEWOEU COLD TRAILING CABLE

3.6/6 kV to 12/20 kV cold flexible medium voltage trailing cable



APPLICATION

Medium voltage trailing and reeling cable for large mobile equipment in open-cast mines, including shovels, draglines, excavators, dumpers and mobile crushers. Designed for high mechanical stress, abrasion and tearing resistance, with fully flexible operation down to -50 deg C.

CONSTRUCTION

Parameter	Value
Conductors	Tinned copper, finely stranded flexible conductor according to DIN VDE 0295
Protective earth conductor	Tinned copper, finely stranded conductor with semi-conductive special rubber compound
Insulation	Rubber compound type EPR 3GI3
Electrical field control	Inner and outer semi-conductive rubber compound, cold strippable outer layer
Pilot conductor	Tinned copper, finely stranded conductor with EPR insulation
Core arrangement	Cores laid up around a conductive central cradle separator with aramid rope in the centre
Inner sheath	Special rubber compound type 5GM3 with mechanical properties
Outer sheath	Rubber compound better than 5GM5 according to DIN VDE 0207 part 21
Outer jacket colour	Black

OPERATING CHARACTERISTICS

Parameter	Value
Rated voltage U ₀ /U	3.6/6 kV; 6/10 kV; 8.7/15 kV; 12/20 kV
Maximum conductor temperature	+90 deg C
Short-circuit conductor temperature	+250 deg C
Fixed installation temperature	-50 deg C to +90 deg C
Fully flexible operation temperature	-50 deg C to +90 deg C
Bending radius	According to DIN VDE 0298 part 3; S-type directional changes 20 x D
Mechanical performance	High abrasion and tear resistance; maximum tensile load on conductor 25 N/mm ²

STANDARDS AND PERFORMANCE

- DIN VDE 0250-813
- IEC 60332-1-2 flame performance
- IEC 60811-404 oil resistance

- EN 50525-2-21 water resistance
- Outdoor and indoor use; resistant to ozone and moisture

TECHNICAL DATA

Nominal data. Internal product codes have been omitted.

Dimensions and Electrical Data (3.6/6 kV)										
Voltage kV	Cross- section	Cond. dia. mm	Outer min. mm	Outer max. mm	Weight kg/km	R20 ohm/km	Cap. uF/km	Ind. mH/km	Amp. A	Short kA
3.6/6	3x16+2x10+10	5	41	45	2270	1.24	0.20	0.39	99	2.29
3.6/6	3x16+2x16+16	5	40.5	44.5	2469	1.24	0.20	0.39	99	2.29
3.6/6	3x25+2x16+16	6.2	43.5	47.5	2790	0.795	0.23	0.36	131	3.58
3.6/6	3x35+2x16+16	7.5	46.5	50	3280	0.565	0.26	0.34	162	5.01
3.6/6	3x50+2x16+16	9	49.5	54	3900	0.393	0.29	0.32	202	7.15
3.6/6	3x70+2x25+16	10.6	55	59.5	5020	0.277	0.34	0.30	250	10.01
3.6/6	3x95+2x25+16	12.6	58.5	63	5860	0.210	0.37	0.29	301	13.59
3.6/6	3x120+2x35+16	14.8	65.5	70	7410	0.164	0.41	0.28	352	17.16
3.6/6	3x150+2x35+16	16	69.8	73.4	8456	0.132	0.44	0.27	404	21.45
3.6/6	3x185+2x50+16	17.7	72.7	77.2	9955	0.108	0.48	0.27	461	26.46
3.6/6	3x240+2x70+16	20.3	80.1	84.6	12618	0.0817	0.54	0.26	540	34.32
3.6/6	3x300+2x95+16	31.3	84	89	15075	0.0654	0.78	0.24	620	42.9

Dimensions and Electrical Data (6/10 kV)										
Voltage kV	Cross- section	Cond. dia. mm	Outer min. mm	Outer max. mm	Weight kg/km	R20 ohm/km	Cap. uF/km	Ind. mH/km	Amp. A	Short kA
6/10	3x16+2x16+16	5	42.5	46.5	2613	1.24	0.19	0.40	99	2.29
6/10	3x25+2x16+16	6.2	46.1	49.6	3041	0.795	0.21	0.37	131	3.58
6/10	3x35+2x16+16	7.5	52.5	56.5	3470	0.565	0.24	0.35	162	5.01
6/10	3x50+2x16+16	9	52	56.5	4080	0.393	0.27	0.33	202	7.15
6/10	3x70+2x25+16	10.6	57	61.5	5240	0.277	0.31	0.31	250	10.01
6/10	3x95+2x25+16	12.6	61.6	66.1	6503	0.210	0.34	0.30	301	13.59
6/10	3x120+2x35+16	14.8	64.2	68.7	7630	0.164	0.38	0.29	352	17.16
6/10	3x150+2x35+16	16	70.6	75.1	8694	0.132	0.41	0.28	404	21.45
6/10	3x185+2x50+16	17.7	74.4	78.9	10467	0.108	0.44	0.27	461	26.46
6/10	3x240+2x70+16	20.3	81.8	86.3	12895	0.0817	0.49	0.26	540	34.32
6/10	3x300+2x95+16	31.3	87.5	92.5	15693	0.0654	0.71	0.24	620	42.9

Dimensions and Electrical Data (8.7/15 kV)										
Voltage kV	Cross- section	Cond. dia. mm	Outer min. mm	Outer max. mm	Weight kg/km	R20 ohm/km	Cap. uF/km	Ind. mH/km	Amp. A	Short kA
8.7/15	3x16+2x16+16	5	47	51	3041	1.24	0.16	0.43	105	2.29
8.7/15	3x25+2x16+16	6.2	52	56	3677	0.795	0.18	0.40	139	3.58
8.7/15	3x35+2x16+16	7.5	55.4	59.9	4138	0.565	0.20	0.37	172	5.01
8.7/15	3x50+2x16+16	9	57.5	61.5	4813	0.393	0.22	0.35	215	7.15
8.7/15	3x70+2x25+16	10.6	64	68	6159	0.277	0.26	0.33	265	10.01
8.7/15	3x95+2x25+16	12.6	68.2	72.7	7123	0.210	0.28	0.32	319	13.59
8.7/15	3x120+2x35+16	14.8	72.9	77.4	8322	0.164	0.31	0.31	371	17.16
8.7/15	3x150+2x35+16	16	75.4	79.9	9645	0.132	0.33	0.30	428	21.45
8.7/15	3x185+2x50+16	17.7	80.9	85.4	11208	0.108	0.36	0.29	488	26.46
8.7/15	3x240+2x70+16	20.3	86.5	91	13991	0.0817	0.40	0.28	574	34.32
8.7/15	3x300+2x95+16	31.3	92	97	16533	0.0654	0.57	0.25	660	42.9

TECHNICAL DATA

Nominal data. Internal product codes have been omitted.

Dimensions and Electrical Data (12/20 kV)										
Voltage kV	Cross-section	Cond. dia. mm	Outer min. mm	Outer max. mm	Weight kg/km	R20 ohm/km	Cap. uF/km	Ind. mH/km	Amp. A	Short kA
12/20	3x16+2x16+16	5	53.5	57.5	3655	1.24	0.14	0.45	105	2.29
12/20	3x25+2x16+16	6.2	56.9	61.4	4145	0.795	0.16	0.42	139	3.58
12/20	3x35+2x16+16	7.5	59.7	64.2	4628	0.565	0.18	0.39	172	5.01
12/20	3x50+2x16+16	9	62.8	67.3	5552	0.393	0.20	0.37	215	7.15
12/20	3x95+2x25+16	12.6	72.5	77	7727	0.210	0.25	0.33	319	13.59
12/20	3x120+2x35+16	14.8	79	83.5	9224	0.164	0.27	0.32	371	17.16
12/20	3x150+2x35+16	16	81.5	86	10324	0.132	0.29	0.31	428	21.45
12/20	3x185+2x50+16	17.7	85.5	90.5	12218	0.108	0.31	0.30	488	26.46
12/20	3x240+2x70+16	20.3	92.6	97.1	14768	0.0817	0.35	0.29	574	34.32
12/20	3x300+2x95+16	31.3	98.5	103.5	17694	0.0654	0.49	0.26	660	42.9

PHYSICAL PARAMETERS

Parameter	Value
Maximum conductor temperature	+90 deg C
Maximum short-circuit temperature	+250 deg C
Fixed installation temperature	min. -50 deg C; max. +90 deg C
Flexible operation temperature	min. -50 deg C; max. +90 deg C
Maximum tensile load on conductor	25 N/mm2
Minimum bending radius	According to DIN VDE 0298 part 3
Minimum S-type directional change distance	20 x D
Application condition	High mechanical stress trailing and reeling service in open-cast mining

ELECTRICAL AND CHEMICAL PARAMETERS

Parameter	Value
Current carrying capacity	Nominal current carrying capacity for rubber cables laid on a surface at 30 deg C ambient temperature
AC test voltage - main cores	11 kV for 3.6/6 kV; 17 kV for 6/10 kV; 24 kV for 8.7/15 kV; 29 kV for 12/20 kV
AC test voltage - control cores	2 kV
Maximum permissible operating voltage AC	4.2/7.2 kV; 6.9/12 kV; 10.4/18 kV; 13.9/24 kV
Maximum permissible operating voltage DC	5.4/10.8 kV; 9/18 kV; 13.5/27 kV; 18/36 kV
Performance against fire	IEC 60332-1-2
Resistance to oil	IEC 60811-404
Water resistance	EN 50525-2-21
Weather resistance	Outdoor and indoor use, resistant to ozone and moisture

Values are nominal. Cable dimensions may vary due to manufacturing tolerances.

CERTIFICATIONS



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