



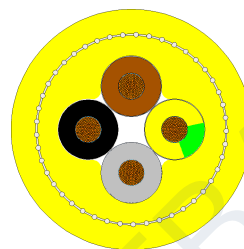
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrial cable

NSHTOEU

0.6/1 kV LHD reeling cable for scoop operations



APPLICATION

Flexible underground reeling cable for frequently changing dynamic loads on scoops (LHDs), suitable for mono-spiral reels and cylindrical reels.

CONSTRUCTION

Parameter	Value
Conductor	Electrolytic copper, very finely stranded, Class FS
Insulation	EPR, compound type 3GI3
Core identification	Power cores black, grey, brown or natural with black figures; protective earth green/yellow
Support element	Central aramid yarn support element with rubber covering
Inner sheath	5GM5 compound, yellow or orange
Torsion protection	Reinforced polyester braid in vulcanized bond, approx. 25% coverage
Outer sheath	Synthetic elastomer such as CR, compound type 5GM5, yellow or orange
Cable design	LHD reeling cable for scoop operations; mono-spiral and cylindrical reels

ELECTRICAL AND CHEMICAL CHARACTERISTICS

Parameter	Value
Rated voltage U0/U	0.6/1 kV; also permitted for 640/1140 V
Maximum AC operating voltage	0.7/1.2 kV
Maximum DC operating voltage	0.9/1.8 kV
AC test voltage	Main cores 2.5 kV for 5 min.; control cores 2 kV
Travel speed	Maximum 160 m/min
Fixed ambient temperature	-40 °C to +90 °C
Fully flexible ambient temperature	-25 °C to +90 °C
Conductor operating temperature	+90 °C
Short-circuit conductor temperature	+250 °C
Tensile load on conductor	30 N/mm ²
Torsional stress	+/- 25 deg/m
S-type directional-change distance	20 x D
Bending radii	According to DIN VDE 0298 Part 3

PERFORMANCE AND USE

Parameter	Value
Fire performance	EN 60332-1-2 / IEC 60332-1-2
Oil resistance	EN 60811-404 / IEC 60811-404
Weather resistance	Outdoor and indoor use; resistant to ozone, UV and moisture
Applications	Underground mining scoops / LHDs with frequently changing dynamic loads
Reel types	Mono-spiral reels and cylindrical reels

TECHNICAL DATA

DIMENSIONS, MECHANICAL AND ELECTRICAL DATA

Size	Colour	Conductor dia. max. mm	OD min. mm	OD max. mm	Weight kg/km	Tensile force max. N
4x16 (6kN)	Orange	5.8	28	31	1450	1920
4x16 (6kN)	Yellow	5.8	28	31	1450	1920
4x25 (6kN)	Yellow	7.3	34	37	2260	3000
4x35 (12kN)	Yellow	8.4	38	41	2930	4200
4x50 (12kN)	Yellow	10.3	44.8	47.8	4000	6000
4x50 (30kN)	Yellow	10.3	42	44	3660	6000
4x70 (20kN)	Yellow	12	48.3	51.3	5050	8400
4x95 (50kN)	Yellow	14	51	53	6030	11400

Current-carrying capacity is based on rubber cables laid on a surface at 30 deg C ambient temperature according to VDE 0298-4, Table 15. Use relevant derating factors for other installation

ELECTRICAL VALUES

Size	Resistance at 20 deg C Ohm/km	Capacitance uF/km	Inductance mH/km	Current A	Short circuit kA
4x16 (6kN)	1.24	0.50	0.30	99	2.29
4x16 (6kN)	1.24	0.50	0.30	99	2.29
4x25 (6kN)	0.795	0.54	0.29	131	3.58
4x35 (12kN)	0.565	0.60	0.28	162	5.01
4x50 (12kN)	0.393	0.62	0.27	202	7.15
4x50 (30kN)	0.393	0.62	0.27	202	7.15
4x70 (20kN)	0.277	0.71	0.26	250	10.01
4x95 (50kN)	0.210	0.72	0.26	301	13.59

Electrical values correspond to the listed cable constructions and conductor sizes.

TECHNICAL DATA

THERMAL AND MECHANICAL DATA

Parameter	Value
Conductor operating temperature	90 deg C
Short-circuit conductor temperature	250 deg C
Fixed installation ambient temperature	-40 deg C to +90 deg C
Fully flexible operation ambient temperature	-25 deg C to +90 deg C
Max. tensile load on conductor	30 N/mm ²
Torsional stress	+/- 25 deg/m
Bending radii	According to DIN VDE 0298 Part 3
Minimum S-type directional-change distance	20 x D
Travel speed	Max. 160 m/min

STANDARDS AND TESTS

Parameter	Value
Construction	DIN VDE 0250-814
Approvals	MSHA P-189-3; TR-Certificate; EAC-Certificate
Fire performance	EN 60332-1-2 / IEC 60332-1-2
Oil resistance	EN 60811-404 / IEC 60811-404
Weather resistance	Outdoor and indoor use; resistant to ozone, UV and moisture
Additional tests	Reversed bending test; roller bending test

CERTIFICATIONS



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