



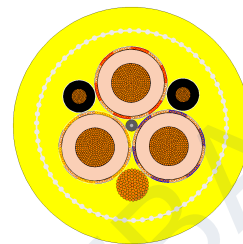
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrial cable

(N)TSCGECEWÖU-GCC

8.7/15 kV and 12/20 kV ATB cable with ground check conductor



APPLICATION

Flexible cable for the energy supply to heavy mobile equipment such as draglines, shovels, dredges, drills and other moving machinery operating in opencast mines and demanding industrial sites. Designed for trailing and reeling duty under severe mechanical stress, abrasion and frequent movement. Special construction includes an additional ground-check conductor for earth-continuity monitoring circuits. Suitable for indoor and outdoor applications where reliable medium-voltage power supply, ground-check function and anti-torsion performance are required.

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	Individual copper braid; two copper earth conductors and one copper ground-check conductor
Central filler	Rubber compound on a textile polyester support
Inner sheath	Abrasion resistant rubber compound
Anti-Torsion Braid	Polyester braid between the inner and outer sheath
Outer sheath	Abrasion resistant rubber compound
Sheath colour	Yellow

CHARACTERISTICS

- Flexible medium-voltage trailing and reeling cable for opencast mining equipment.
- Additional ground-check conductor for earth-continuity monitoring circuits.
- Flame retardant according to IEC/EN 60332-1-2.
- Anti-torsion braid and abrasion resistant sheath for demanding operating conditions.

OPERATING CHARACTERISTICS

Parameter	Value
Voltage rating U _o /U	8.7/15 kV; 12/20 kV
Test voltage	24 kV for 8.7/15 kV; 29 kV for 12/20 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

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	Ground check mm2	Cond. dia. mm	Min OD mm	Max OD mm	Tensile N	Weight kg/km
8.7/15	3+2+1	25	25/2	10	6.8	53.9	59.3	1125	4490
8.7/15	3+2+1	35	25/2	10	7.8	55.3	60.8	1575	4920
8.7/15	3+2+1	50	25/2	10	9.4	58.5	64.2	2250	5700
8.7/15	3+2+1	70	35/2	10	11.2	64.2	70.5	3150	7200
8.7/15	3+2+1	95	50/2	10	12.7	67.9	74.4	4257	8480
12/20	3+2+1	25	25/2	10	6.8	58.2	63.9	1125	5110
12/20	3+2+1	35	25/2	10	7.8	59.8	65.7	1575	5580
12/20	3+2+1	50	25/2	10	9.4	64.6	70.9	2250	6550
12/20	3+2+1	70	35/2	10	11.2	68.3	74.8	3150	7800

CURRENT CARRYING CAPACITY

Area mm2	Floor A	1 layer	2 layer	3 layer	4 layer	5 layer	6 layer	7 layer
25	139	111	85	68	58	53	38	31
35	172	138	105	84	72	65	46	38
50	216	173	132	106	91	82	58	48
70	265	212	162	130	111	101	72	58
95	319	255	195	156	134	121	86	70

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

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



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