



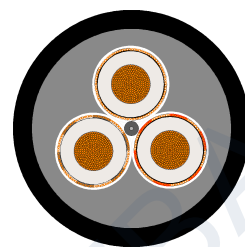
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrialcable

(N)TSCGECEWÖU

8.7/15 kV and 12/20 kV submersible cable



APPLICATION

Flexible supply cable for permanent immersion in salty and brackish water up to 300 metres, under high mechanical stress and abrasion. Suitable for pumps, dredgers, floating docks and trailing operations of opencast mining equipment. Designed for indoor and outdoor applications where reliable medium-voltage power supply, water resistance and mechanical durability 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
Protective earth conductor	Individual copper wire braid
Central filler	Rubber compound on a textile polyester support
Inner sheath	EPR rubber compound with waterproofing
Outer sheath	CM rubber compound with waterproofing
Sheath colour	Black

CHARACTERISTICS

- Flexible medium-voltage submersible cable for salty and brackish water.
- Suitable for pumps, dredgers, floating docks and opencast mining equipment.
- Flame retardant according to IEC/EN 60332-1-2.
- Waterproof inner and outer sheaths for permanent immersion up to 300 metres.

OPERATING CHARACTERISTICS

Parameter	Value
Voltage rating U_0/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
Submersible depth	300 m
Minimum bending radius	6 x overall diameter fixed; 10 x overall diameter flexed

STANDARDS

Parameter	Value
Cable standards	VDE 0250 Part 813, HD 22.16, 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	Cond. dia. mm	Min OD mm	Max OD mm	Tensile N	Weight kg/km
8.7/15	3+3	25	25/3E	6.8	49.4	51.2	1125	3430
8.7/15	3+3	35	25/3E	7.8	50.9	52.7	1575	3800
8.7/15	3+3	50	25/3E	9.4	55.8	57.6	2250	4700
8.7/15	3+3	70	35/3E	11.2	59.6	61.4	3150	5670
8.7/15	3+3	95	50/3E	12.7	63.3	65.6	4257	6830
8.7/15	3+3	120	70/3E	14.4	69.8	72.2	5400	8520
12/20	3+3	25	25/3E	6.8	55.9	57.7	1125	4160
12/20	3+3	35	25/3E	7.8	57.3	59.1	1575	4560
12/20	3+3	50	25/3E	9.4	60.5	62.3	2250	5300
12/20	3+3	70	35/3E	11.2	66.1	67.9	3150	6580
12/20	3+3	95	50/3E	12.7	69.8	72.2	4257	7740

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
120	371	297	226	182	156	141	100	82

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

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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