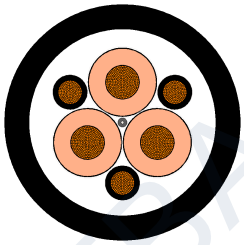
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrialcable

(N)TSCGEWÖU Submersible

8.7/15 kV and 12/20 kV submersible cable



APPLICATION

Flexible submersible medium-voltage supply cable for permanent immersion in salty and brackish water up to 300 metres under high mechanical stresses. Suitable for pumps, dredges, floating docks and trailing operations of opencast mining equipment. 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	EPR rubber compound water proofing
Outer sheath	CM rubber compound water proofing
Sheath colour	Black

CHARACTERISTICS

- Submersible cable for permanent salty and brackish water immersion up to 300 m.
- Designed for high mechanical stresses in pumps, dredges, floating docks and opencast mining equipment.
- Flexible rubber construction suitable for trailing duty and outdoor use.
- Flame retardant according to IEC/EN 60332-1-2.

OPERATING CHARACTERISTICS

Parameter	Value
Voltage rating Uo/U	8.7/15 kV; 12/20 kV
Test voltage	24 kV for 8.7/15 kV; 29 kV for 12/20 kV
Fixed ambient temperature	-40 °C to +90 °C
Flexed ambient temperature	-25 °C to +90 °C
Maximum permissible water temperature	+40 °C
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

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 kV				
8.7/15	3+3	25	25/3	6.8	47.3	49	1500	3310
8.7/15	3+3	35	25/3	7.8	48.8	50.6	2100	3680
8.7/15	3+3	50	25/3	9.4	53.7	55.5	3000	4580
8.7/15	3+3	70	35/3	11.2	57.5	59.3	4200	5600
8.7/15	3+3	95	50/3	12.7	60.8	63.1	5700	6550
8.7/15	3+3	120	70/3	14.4	66.4	68.7	7200	8130
8.7/15	3+3	150	70/3	16.3	71	73.4	9000	9460
8.7/15	3+3	185	95/3	17.6	73.1	75.5	11100	10700
				12/20 kV				
12/20	3+3	25	25/3	6.8	52	53.8	1500	3830
12/20	3+3	35	25/3	7.8	55.2	57	2100	4440
12/20	3+3	50	25/3	9.4	58.4	60.2	3000	5170
12/20	3+3	70	35/3	11.2	62.1	64.4	4200	6250
12/20	3+3	95	50/3	12.7	67.2	69.5	5700	7480
12/20	3+3	120	70/3	14.4	71	73.4	7200	8840

ELECTRICAL DATA

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
150	428	342	261	210	180	163	116	94
185	488	390	298	239	205	185	132	107

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

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