submersible water-quality, CTD & ocean sensor cable

Marine Silicone & PUR Subsea Cable



DNV-ST-E402 / VDE 0285 · 300/500 V · Submersible water-quality, ctd & ocean sensor cable

DNV-ST-E402 / VDE 0285 | 300/500 V (-40 to +125 °C) | Subsea / Marine Outer Protective She

Application

Marine Silicone & PUR Subsea Cable featuring flexible stranded copper conductors (7 cores) and subsea / marine outer protective sheath (DNV-ST-E402 / VDE 0285, 300/500 V, -40 to +125 °C, min. bend radius 5 × OD).

Typical uses: Aquaculture Dissolved Oxygen (DO), pH & Salinity Monitoring, Vented Hydrostatic Water-Level & Borehole Pressure Probes, Oceanographic CTD Rosettes, Current Meters & Mooring Buoys, Recirculating Aquaculture (RAS) & Wastewater Sensor Networks

Construction





Cross-section, not to scale

1. Flexible Stranded Copper Conductors (7 C
2. Copper Wire Braid EMC Screen
3. Subsea / Marine Outer Protective Sheath

Technical data

Typical values

Rated voltage / operating system	300/500 V (DNV-ST-E402 Marine Silicone-Insulated & PUR-Sheathed Subsea Cable Standard)	**Core / conductor construction**	Flexible Stranded Copper Conductors (7 Cores) — Class 5 / Class 6 copper conductors with High-density polyethylene (HDPE / PE) core insulation
Primary dielectric / optical buffer	Copper Wire Braid EMC Screen — High-coverage braided copper shield for EMI/VFD protection	**Continuous operating temperature**	−40…+125 °C (submerged seawater & topside deck service)
Hydrostatic & thermal cycling endurance	Verified cold-bend and wet dielectric stability across −40…+125 °C per DNV-ST-E402 Marine Silicone-Insulated & PUR-Sheathed Subsea Cable Standard	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	Subsea / Marine Outer Protective Sheath — Black hydrolysis- & abrasion-resistant marine Polyurethane (PUR) outer sheath	**Minimum bending radius**	5 × OD
Reinforcement / screen / bedding layer	Copper Wire Braid EMC Screen — High-coverage braided copper shield for EMI/VFD protection	**Seawater, hydrolysis & oil resistance**	Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per DNV-ST-E402 Marine Silicone-Insulated & PUR-Sheathed Subsea Cable Standard
Hydrostatic pressure & water blocking	Radial and longitudinal water-blocking integrity verified per DNV-ST-E402 Marine Silicone-Insulated & PUR-Sheathed Subsea Cable Standard	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	DNV-ST-E402 Marine Silicone-Insulated & PUR-Sheathed Subsea Cable Standard		

Sizes

3 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Configuration	Core / stranding	Outer Ø ≈ mm	Net weight ≈ kg/km	Max. pulling kN ≈	Min. bend R mm
Marine Silicone & PUR Subsea Cable Construction Schedule (−40…+125 °C) 3 sizes						
☐ **Marine Silicone 4G1.5 / 5C18AWG**	**4G1.5 mm² (or 5C × 18 AWG)**	**IEC 60228 Class 5/6 Cu/SnCu**	**9.6**	**145**	**2.2**	**55**
☐ **Marine Silicone 7G1.5 / 8C16AWG**	**7G1.5 mm² (or 8C × 16 AWG)**	**IEC 60228 Class 5/6 Cu/SnCu**	**12.2**	**235**	**3.6**	**70**
☐ **Marine Silicone 12G2.5 / 16C16AWG**	**12G2.5 mm² (or 16C × 16 AWG)**	**IEC 60228 Class 5/6 Cu/SnCu**	**17.4**	**510**	**7.5**	**105**

– Custom core counts, optical fiber channels, wet-mate terminations and continuous winch lengths available per DNV-ST-E402 Marine Silicone-Insulated & PUR-Sheathed Subsea Cable Standard.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance / Load	Operating temp.
4G1.5 mm² (or 5C × 18 AWG)	**13.30**	**300/500 V (18 A)**	**−40…+125 °C**
7G1.5 mm² (or 8C × 16 AWG)	**13.30**	**300/500 V (16 A)**	**−40…+125 °C**
12G2.5 mm² (or 16C × 16 AWG)	**7.98**	**300/500 V (22 A)**	**−40…+125 °C**

– Every production length undergoes routine conductor DC resistance / OTDR optical attenuation, AC dielectric and dimensional verification.

Standards and approvals

- DNV-ST-E402 / VDE 0285 Compliant
- EN 10204 3.1 Factory Test Certificate
- CE, RoHS 2 (2011/65/EU) & REACH

Certifications

Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone
+86 185 9591 3361

Email
info@tebaoflex.com

Web
tebaoflex.com/cables/marine-silicone-pur-subsea-cable

Typical values for this cable type, based on DNV-ST-E402 Marine Silicone-Insulated & PUR-Sheathed Subsea Cable Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.