subsea ROV umbilical, AUV tether & sonar tow cable

# Mariculture Subsea Hybrid Cable

## Mariculture Fish Farming Subsea Hybrid Cable

IEC 60502-1 / NS 9415 · 0.6/1 kV · Subsea rov umbilical, auv tether & sonar tow cable




IEC 60502-1 / NS 9415 | 0.6/1 kV (-40 to +90 °C) | Subsea / Marine Outer Protective She

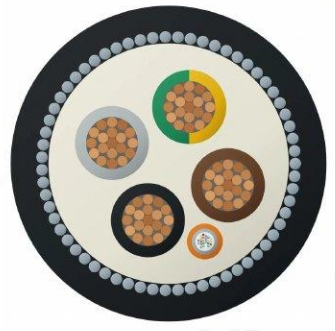
## Application

Mariculture Fish Farming Subsea Hybrid Cable featuring single-mode / multi-mode optical unit and subsea / marine outer protective sheath (IEC 60502-1 / NS 9415, 0.6/1 kV, -40 to +90 °C, min. bend radius 8 × OD).

**Typical uses:** Work-Class & Observation ROV Umbilicals and TMS Tethers, Offshore Aquaculture Net Cleaners & Subsea Cage Inspection, AUV, Ocean Glider & Expendable Spool-Payoff Micro-Tethers, USV Towed Sonar Arrays, Seabed Crawlers & Subsea Trenchers

## Construction



Cross-section, not to scale

1. Single-Mode / Multi-Mode Optical Unit
2. Power & Control Copper Conductors
3. Subsea / Marine Outer Protective Sheath

## Technical data

Typical values

| | | | |
|---|---|---|---|
| **Rated voltage / operating system** | 0.6/1 kV (IEC 60502-1 & NS 9415 Mariculture Fish Farming Subsea Hybrid Specification) | **Core / conductor construction** | Single-Mode / Multi-Mode Optical Unit — Hermetic stainless-steel tube / tight-buffered optical unit |
| **Primary dielectric / optical buffer** | Power & Control Copper Conductors — Stranded copper conductors with Cross-linked polyethylene (XLPE) insulation | **Continuous operating temperature** | −40…+90 °C (submerged seawater & topside deck service) |
| **Hydrostatic & thermal cycling endurance** | Verified cold-bend and wet dielectric stability across −40…+90 °C per IEC 60502-1 & NS 9415 Mariculture Fish Farming Subsea Hybrid Specification | **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** | 8 × OD |
| **Reinforcement / screen / bedding layer** | Power & Control Copper Conductors — Stranded copper conductors with Cross-linked polyethylene (XLPE) insulation | **Seawater, hydrolysis & oil resistance** | Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per IEC 60502-1 & NS 9415 Mariculture Fish Farming Subsea Hybrid Specification |
| **Hydrostatic pressure & water blocking** | Radial and longitudinal water-blocking integrity verified per IEC 60502-1 & NS 9415 Mariculture Fish Farming Subsea Hybrid Specification | **RoHS & REACH compliance** | RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant |
| **Standards** | IEC 60502-1 & NS 9415 Mariculture Fish Farming Subsea Hybrid Specification | | |

## 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 |
|---|---|---|---|---|---|---|
| **Mariculture Subsea Hybrid Cable Construction Schedule (−40…+90 °C)** 3 sizes | | | | | | |
| ☐ **Mariculture Subsea Hybrid Cable Hybrid 4G2.5+FO** | **4G2.5 mm² Power + 4×SM + 2×2×0.5** | **Class 5 SnCu + Aramid Braid + Subsea PUR** | **14.6** | **285** | **18.0** | **90** |
| ☐ **Mariculture Subsea Hybrid Cable Hybrid 4G6+FO** | **4G6.0 mm² Power + 4×SM/MM + 4×2×0.5** | **Class 5 SnCu + Aramid Braid + Subsea PUR** | **19.2** | **540** | **32.0** | **120** |
| ☐ **Mariculture Subsea Hybrid Cable Hybrid 4G16+FO** | **4G16 mm² Power + 8×SM/MM + 4×2×0.75** | **Class 5 SnCu + Heavy Aramid + Subsea PUR** | **26.5** | **1,120** | **55.0** | **165** |

– Custom core counts, optical fiber channels, wet-mate terminations and continuous winch lengths available per IEC 60502-1 & NS 9415 Mariculture Fish Farming Subsea Hybrid Specification.

## Electrical, optical & thermal parameters

3 sizes

| Configuration | Max. DC $R_{20}$ Ω/km | Rating / Impedance / Load | Operating temp. |
|---|---|---|---|
| **4G2.5 mm² Power + 4×SM + 2×2×0.5** | **7.98** | **0.6/1 kV · 18 kN Tensile** | **−40…+90 °C** |
| **4G6.0 mm² Power + 4×SM/MM + 4×2×0.5** | **3.30** | **0.6/1 kV · 32 kN Tensile** | **−40…+90 °C** |
| **4G16 mm² Power + 8×SM/MM + 4×2×0.75** | **1.21** | **0.6/1 kV · 55 kN Tensile** | **−40…+90 °C** |

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

## Standards and approvals

- IEC 60502-1 / NS 9415 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/mariculture-fish-farming-subsea-hybrid-cable**

Typical values for this cable type, based on IEC 60502-1 & NS 9415 Mariculture Fish Farming Subsea Hybrid Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.