



Unrepeated FIMT submarine fibre-optic cable

Unrepeated FIMT Submarine Fibre Cable

Double-armoured laser-welded 316L FIMT unrepeated submarine telecom & tie-back cable



ITU-T G.972 / G.976

12-144 Fibres

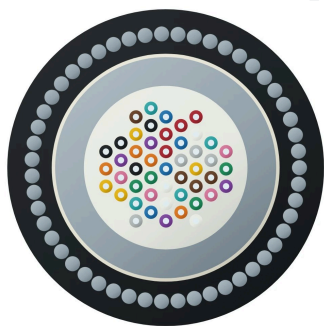
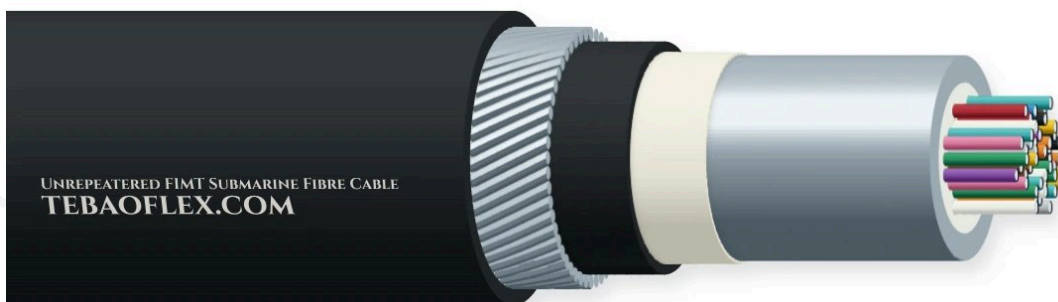
SA / DA / RA Armour

Application

Unrepeated submarine fibre-optic telecom and offshore platform tie-back cable to ITU-T G.972/G.976, with up to 144 ultra-low-loss G.652.D or G.654.E fibres inside a hermetically welded 316L FIMT and double steel wire armour.

Typical uses: Island & Coastal Festoon Telecom, Offshore Oil & Gas Platform Tie-Back, Offshore Wind Farm SCADA Ring, Subsea Cabled Observatories, Subsea Pipeline Leak Detection (DAS)

Construction



Cross-section, not to scale

- 1 Hermetic 316L FIMT optical core
- 2 Primary HDPE insulating sheath
- 3 Inner galvanised steel wire armour
- 4 Polypropylene bedding & cushion yarn
- 5 Outer galvanised steel wire armour
- 6 Outer polypropylene serving / HDPE jacket

Technical data

Typical values

FIMT fault-location insulation	≥ 10,000 MΩ·km (HDPE sheath before armour)
Metallic tube resistance	≤ 18 Ω/km (316L FIMT + steel vault)
Cable tank storage & laying	−30 °C to +70 °C
Nominal transient tensile (NTTS)	80 kN (SA) · 180 kN (DA) · 250 kN (RA)
Ultimate breaking load (UTS)	130 kN (SA) to 450 kN (DA/RA)
Min. bend radius (laying/no load)	20 × OD (under tension) · 12 × OD (static)
Attenuation @ 1550 nm	≤ 0.19 dB/km (G.652.D) · ≤ 0.16 dB/km (G.654.E)
Polarisation mode dispersion	≤ 0.06 ps/√km link design value
Hydrogen ageing resistance	< 0.003 dB/km over 25 years (ITU-T G.976)
Standards	ITU-T G.972 / ITU-T G.976

DC sheathspark test	25 kV DC spark test on primary HDPE sheath
Seabed operating temperature	−10 °C to +50 °C
Bitumen softening point	≥ +75 °C (non-drip tropical grade)
Nominal operating tension (NOT)	45 kN (SA) · 100 kN (DA) · 140 kN (RA)
Crush resistance (IEC 60794-1-21)	10 kN/100 mm (SA) · 25–40 kN/100 mm (DA/RA)
Fibre options	ITU-T G.652.D (low water peak) or G.654.E (ultra-low loss)
Attenuation @ 1310 nm	≤ 0.34 dB/km (G.652.D)
Hydrostatic water depth	Up to 2,000 m (SA/DA) · up to 6,000 m (LWP)
Impact resistance	≥ 100 J (SA) · ≥ 250 J (DA/RA) per ITU-T G.976

Sizes

12 standard constructions

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

Order designation	Armour Protection Grade	Fibres Count	Nominal OD mm	Weight in air kg/km	Weight in sea kg/km	NTTS kN	UTS kN	Static MBR mm
Light Weight Protected (LWP) & Single Armoured (SA) Grades 6 sizes								
☐ UFIMT-LWP-24FO	LWP (Steel Vault + Al Tape + HDPE)	24	14.5	390	220	55	90	218
☐ UFIMT-LWP-48FO	LWP (Steel Vault + Al Tape + HDPE)	48	15.2	430	245	60	95	228
☐ UFIMT-SA-24FO	SA (Single Galvanised Wire Armour)	24	21.8	1,180	850	85	140	327
☐ UFIMT-SA-48FO	SA (Single Galvanised Wire Armour)	48	22.4	1,240	895	90	150	336
☐ UFIMT-SA-96FO	SA (Single Galvanised Wire Armour)	96	24.0	1,410	1,020	100	165	360
☐ UFIMT-SA-144FO	SA (Dual FIMT · Single Armour)	144	26.2	1,650	1,190	110	180	393
Double Armoured (DA) & Rock Armoured (RA) Nearshore Grades 6 sizes								
☐ UFIMT-DA-24FO	DA (Double Contra-Helical Armour)	24	31.5	2,860	2,120	180	300	473
☐ UFIMT-DA-48FO	DA (Double Contra-Helical Armour)	48	32.2	2,980	2,210	185	310	483
☐ UFIMT-DA-72FO	DA (Double Contra-Helical Armour)	72	33.0	3,120	2,310	195	325	495
☐ UFIMT-DA-96FO	DA (Double Contra-Helical Armour)	96	34.2	3,340	2,480	205	340	513
☐ UFIMT-DA-144FO	DA (Dual FIMT · Double Armour)	144	36.8	3,820	2,840	225	375	552
☐ UFIMT-RA-48FO	RA (Short-Pitch Heavy Rock Armour)	48	39.5	4,680	3,520	250	450	593

– NTTS = Nominal Transient Tensile Strength (zero permanent optical strain after recovery); UTS = Ultimate Tensile Strength.

Standards and approvals

- ✓ ITU-T G.972 / G.976 Submarine Qualification
- ✓ ITU-T G.652.D / G.654.E Ultra-Low-Loss Fibre

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/double-armoured-fibre-in-metal-tube-fimt-unrepeated-subsea-telecom-cable



Typical values for this cable type, based on ITU-T G.972 / ITU-T G.976 / IEC 60794-3. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.