



Fibre optic cable U-STC B2ca

Article number: 75559

12-01-2026

Description

U-STC (Universal Soft Tube Cable) is a lightweight and robust dielectric distribution cable. The optical fibers are grouped into "soft tube" modules allowing easy and quick opening. Outdoors, it can be installed in a duct or on facade, therefore meeting many applications. With its very high fire resistance (B2ca), it is also suitable for indoor installation. It is therefore perfectly suited for the penetration of telecom exchanges, but also for the connection of FTTH mobile sites in high-rise buildings. The uniquely versatile U-STC cable is the ideal solution for all public buildings, but also for risk premises such as data centers, and road or rail infrastructure.



* This image may differ from the actual product.

Trading information

Product group	Fibre optic cable
Description	48x SM G.657.A2 (8x6)
Type	U-STC B2ca
Net. Weight	0.092 kg/m
Sheath marking	ACE - TKF U-STC B2ca 48x SM G.657.A2 (8x6) 75559 {Batch} [-CE-] DOP0104 {Year} {Length}



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Product characteristics

Cable type	STC
Fibre type	Single mode 9/125
Optical fibre standard	ITU-T G.657.A2
Number of fibres	48
Number of fibres per tube	6
Type of tube	Soft tube
Cable metal free	Yes
Stripability outer sheath	1,000
Stripability optical element	> 100mm, down to primary coating
With strain relief	Yes
Type of strain relief	FRP + E-glass
Material outer sheath	HFFR
Colour outer sheath	Black
Outer sheath thickness	2 mm
Outer diameter approximate	9 mm
Max. cord diameter	9.3 mm

Application

Standardization	EN IEC 60794-6-10
Test procedures	IEC 60794-1-2
Application	Inside/outside
Reaction-to-fire according to EN 13501-6: Class	B2ca
Reaction-to-fire according to EN 13501-6: Smoke production	s1a
Reaction-to-fire according to EN 13501-6: Flaming droplets/particles	d0
Reaction-to-fire according to EN 13501-6: Acidity	a1



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Mechanical specification

Tensile load short term (Tm)	1,900 N
Max. cable strain at Tm	0.6 %
Max. fiber strain at Tm	0.6 %
Tensile load long term (Tl)	500 N
Max. fibre elongation at Tl	0.2 %
Min. bending radius during installation	135 mm
Min. permitted bending radius, stationary application/permanent installation	90 mm
Crush resistance E3A short (1min)	2,000 N/dm
Crush resistance E3A long	1,000 N/dm
Crush load E3A long application time	10 min
Crush load E3B long application time	10 min
Impact strength	5 J
Striking surface radius	300 mm
Torsion resistance	180 °/m
Kink resistance	90 mm

Optical specification

Fibre category	OS2
Max. attenuation @ 1310 nm	0.38 dB/km
Max. attenuation @ 1550 nm	0.25 dB/km
Max. attenuation @ 1625 nm	0.3 dB/km



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Environmental specification

Longitudinal watertight construction	Super Absorbing Polymer
Installation temperature	-10 / 50 °C
Transportation and storage temperature	-40 / 70 °C
Operational temperature range Ta1 - Tb1	-30 / 70 °C
Max. attenuation increase during Ta1 - Tb1	0.05 dB
Operational temperature range Ta2 - Tb2	-40 / 70 °C
Max. attenuation increase during Ta2 - Tb2	0.15 dB
TC sample length for TC acc F1 or F12	1,000 m
UV resistant	Yes
UV protection	ISO 4892/2
Color fastness	Blue wool scale 8

Other specification

Halogen free according to EN 60754-1/2	Yes
Low smoke (according to EN 61034-2)	Yes



DECLARATION OF PERFORMANCE (DOP)

Nr. DoP0104

1. Unique identification code for the product type:
See appendix 1 (page 2/2)
2. Intended use of the construction product:
Supply of optical fibre cables in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke.
3. Manufacturer:
**TKF (B.V. Twentsche Kabelfabriek)
Spinnerstraat 15
7481 KJ Haaksbergen
Netherlands
Tel.: +31(0)53 573 22 55
E-mail: info@tkf.nl**
4. System of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V: **System 1+**
5. Notified body: **SP NB 0402**
6. Declared performance:

Essential characteristics	Performance	Harmonized technical specification
Reaction to fire	B2ca,s1a,d0,a1	EN50575:2014/A1:2016
Dangerous substances	NPD	(EC) No 1907/2006, (REACH)

7. The performance of the product identified is in conformity with the declared performance.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in this document.

Signed for and on behalf of the manufacturer by:

H. Woldhuis
R&D Manager Optical Fibre Cables

Haaksbergen, March 17th 2023

Signature



Nr. DoP0104



Appendix 1

Product type	Number of tubes	Number of fibres
U-STC B2ca	1 - 24	1 - 288



TECHNICAL PRODUCT INFORMATION

Product characteristics - optical fibres

21-06-2023

Fibre specification G.657.A2

Fibre	
Type of fibre	Hydrogen passivated, dispersion unshifted, groove assisted, bending loss insensitive single mode fibre 9/125 μm Full compatible with G.652.D fibre Optical and geometrical properties exceed ITU-recommendations G.652.D and G.657.A1
Standard	IEC-60793-2-50, B-657.A2
Standard	ITU-T G.657.A2

Characteristics

Parameter		Properties	Unit
Mode field diameter: 1310 nm		8.6 ± 0.4	μm
Mode field diameter: 1550 nm		9.6 ± 0.5	μm
Core/cladding concentricity error	max.	0.5	μm
Cladding diameter		125.0 ± 0.5	μm
Cladding non-circularity	max.	0.7	%
Coating diameter		242 ± 5	μm
Coating/cladding concentricity error	max.	8	μm
Temperature sensitivity: -60 to +85 °C	max.	0.05	dB/km
Bending sensitivity - 100 turns around Ø50 mm - 1550 nm	max.	0.05	dB
Bending sensitivity - 100 turns around Ø60 mm - 1625 nm	max.	0.05	dB
Bending sensitivity - 10 turns around Ø30 mm - 1550 nm	max.	0.03	dB
Bending sensitivity - 10 turns around Ø30 mm - 1625 nm	max.	0.1	dB
Bending sensitivity - 1 turn around Ø20 mm - 1550 nm	max.	0.1	dB
Bending sensitivity - 1 turn around Ø20 mm - 1625 nm	max.	0.2	dB
Bending sensitivity - 1 turn around Ø15 mm - 1550 nm	max.	0.5	dB
Bending sensitivity - 1 turn around Ø15 mm - 1625 nm	max.	1.0	dB
Proof test level	min.	0.70	GPa
Fibre curl	min.	4	m
Cable cut-off wavelength	max.	1260	nm
Zero-dispersion wavelength		1300 – 1324	nm
Zero-dispersion slope	max.	0.090	ps/nm ² ·km
Chromatic dispersion: 1550 nm	max.	18	ps/nm·km
Chromatic dispersion: 1625 nm	max.	23	ps/nm·km
Polarisation mode dispersion: max. individual fibre	max.	0.1	ps/nm·km
PMDQ	max.	0.04	ps/ $\sqrt{\text{km}}$
Max. attenuation at 1383 nm (α_{1383}) [note a]	max.	α_{1310}	-
Effective group core refractive index: 1310 nm		1.4676	-
Effective group core refractive index: 1550 nm		1.4683	-
Effective group core refractive index: 1625 nm		1.4685	-

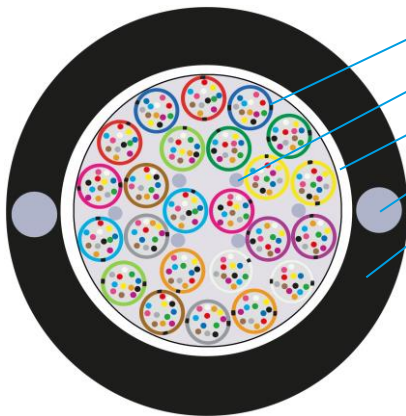
[note a: after hydrogen ageing]

TECHNICAL PRODUCT INFORMATION

Cable construction and colour code

14-12-2023

U-STC B2ca - G.657.A2

Cross section image	Description
	Soft tube with optical fibres
	Water blocking yarns
	Water blocking glass yarns
	Embedded strength element (GFRP)
	Outer sheath

Standard colours France

Fibres		Soft tubes							
Group 1		< 12 tubes		> 12 tubes					
1	Red	1	Red	1	Red +t	13	Red +2t		
2	Blue	2	Blue	2	Blue +t	14	Blue +2t		
3	Green	3	Green	3	Green +t	15	Green +2t		
4	Yellow	4	Yellow	4	Yellow +t	16	Yellow +2t		
5	Violet	5	Violet	5	Violet +t	17	Violet +2t		
6	White	6	White	6	White +t	18	White +2t		
7	Orange	7	Orange	7	Orange +t	19	Orange +2t		
8	Gray	8	Gray	8	Gray +t	20	Gray +2t		
9	Brown	9	Brown	9	Brown +t	21	Brown +2t		
10	Black	10	Black	10	Light green +t	22	Light green +2t		
11	Turquoise	11	Turquoise	11	Turquoise +t	23	Turquoise +2t		
12	Pink	12	Pink	12	Pink +t	24	Pink +2t		

note +t: indicates a black tracer



TECHNICAL PRODUCT INFORMATION

Product characteristics - optical fibres

21-06-2023

Fibre specification G.657.A2 - 200µm

Fibre	
Type of fibre	Hydrogen passivated, dispersion unshifted, groove assisted, bending loss insensitive single mode fibre 9/125 µm Full compatible with G.652.D fibre Reduced coating diameter Optical and geometrical properties exceed ITU-recommendations G.652.D and G.657.A1
Standard	IEC-60793-2-50, B-657.A2
Standard	ITU-T G.657.A2

Characteristics

Parameter		Properties	Unit
Mode field diameter: 1310 nm		8.6 ± 0.4	µm
Mode field diameter: 1550 nm		9.6 ± 0.5	µm
Core/cladding concentricity error	max.	0.5	µm
Cladding diameter		125.0 ± 0.5	µm
Cladding non-circularity	max.	0.7	%
Coating diameter		198 ± 6	µm
Coating/cladding concentricity error	max.	8	µm
Temperature sensitivity: -60 to +85 °C	max.	0.05	dB/km
Bending sensitivity - 100 turns around Ø50 mm - 1550 nm	max.	0.05	dB
Bending sensitivity - 100 turns around Ø60 mm - 1625 nm	max.	0.05	dB
Bending sensitivity - 10 turns around Ø30 mm - 1550 nm	max.	0.03	dB
Bending sensitivity - 10 turns around Ø30 mm - 1625 nm	max.	0.1	dB
Bending sensitivity - 1 turn around Ø20 mm - 1550 nm	max.	0.1	dB
Bending sensitivity - 1 turn around Ø20 mm - 1625 nm	max.	0.2	dB
Bending sensitivity - 1 turn around Ø15 mm - 1550 nm	max.	0.5	dB
Bending sensitivity - 1 turn around Ø15 mm - 1625 nm	max.	1.0	dB
Proof test level	min.	0.70	GPa
Fibre curl	min.	4	m
Cable cut-off wavelength	max.	1260	nm
Zero-dispersion wavelength		1300 – 1324	nm
Zero-dispersion slope	max.	0.090	ps/nm ² ·km
Chromatic dispersion: 1550 nm	max.	18	ps/nm·km
Chromatic dispersion: 1625 nm	max.	23	ps/nm·km
Polarisation mode dispersion: max. individual fibre	max.	0.1	ps/nm·km
PMDQ	max.	0.04	ps/√km
Max. attenuation at 1383 nm (α ₁₃₈₃) [note a]	max.	α ₁₃₁₀	-
Effective group core refractive index: 1310 nm		1.4676	-
Effective group core refractive index: 1550 nm		1.4683	-
Effective group core refractive index: 1625 nm		1.4685	-

[note a: after hydrogen ageing]