



Commercial information		Specifications	Unit
Article class		Fibre optic cable	
Serie		Fibre optic cable Single mode	
Type		MUC	
Description		4x SM G.657.A1	
Nett Weight		3	kg/km
Marking		ACE - TKF MUC GAGLDV 4 SM G657A1 S12 74638 {Batch} {Year} --- {Length} ---	

Ordercode	EAN code	Specifications	Unit
74638	8713182232351	RL à 1	m
74638H X 6010	8713182232344	RL à 6010	m

Construction		Specifications	Unit
Cable type		MUC	
Fibre type		Single mode 9/125	
Optical fibre standard		ITU-T G.657.A1	
Number of fibres		4	
Number of fibres per tube		4	
Number of cores		1	
Type of tube		Loose tube, gel filled	
Cable metal free		Yes	
Number of layers		1 Layer	
Strain relief		Yes	
Type of strain relief		Aramid fibre	
Material outer sheath		PE (polyethylene)	
Colour outer sheath		Black	
Outer sheath thickness		0.2	mm
Outer diameter approx.		2.0	mm

Characteristics for use		Specifications	Unit
Application		Outside	
Blowable		Yes	

Technical characteristics		Specifications	Unit
Standardization		EN IEC 60794-5-10	
Test procedures		IEC 60794-1-2	
Longitudinal water blocking		Yes	
Installation temperature		-15 / 50	°C
Transportation and storage temperature		-45 / 70	°C
Operational temperature range Ta1 - Tb1		-30 / 60	°C
Operational temperature range Ta2 - Tb2		-40 / 70	°C
Max. attenuation increase during Ta2 - Tb2		0.2	dB
UV-protection		ISO 4892/2	



Mechanical characteristics	Specifications	Unit
Tensile load short term (Tm)	200	N
Max. fiber strain at Tm	0.45	%
Tensile load long term (Tl)	50	N
Min. bending radius after installation	20	mm
Min. bending radius during installation	30	mm
Crush resistance E3A short (1min)	1000	N/dm
Crush resistance E3A long	500	N/dm
Crush load E3A long application time	10	min
Impact strength	2	J
Striking surface radius	300	mm
Torsion resistance	360	°/m
Kink resistance	30	mm

Optical characteristics	Specifications	Unit
Fibre category	OS2	
Max. attenuation @ 1310 nm	0.36	dB/km
Max. attenuation @ 1550 nm	0.25	dB/km
Max. attenuation @ 1625 nm	0.35	dB/km

Other characteristics/features	Specifications	Unit
Halogen free (acc. EN 60754-1/2)	Yes	
Caloric value	100	MJ/km



Fibre:

Product Characteristics - Optical fibres

type of fibre	Hydrogen passivated, dispersion unshifted, matched cladding. Bending loss insensitive singlemode fibre 9/125µm. Fully 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, B6-a1
Standard	ITU-T G.657.A1

Characteristics:

Properties

Unit

Mode field diameter; 1310nm	9.0 ± 0.3	µm
Mode field diameter; 1550nm	10.2 ± 0.4	µm
Core non-circularity	max. 6	%
Core/Cladding concentricity error	max. 0.4	µm
Cladding diameter	125.0 ± 0.5	µm
Cladding non-circularity	max. 0.6	%
Coating diameter	242 ± 5	µm
Coating/Cladding concentricity error	max. 8	µm
Temperature sensitivity; -60°C to +85°C	max. 0.05	dB/km
Bending sensitivity - 10 turns around Ø30mm - 1550nm	max. 0.1	dB
Bending sensitivity - 10 turns around Ø30mm - 1625nm	max.0.3	dB
Bending sensitivity - 1 turn around Ø20mm - 1550nm	max.0.75	dB
Bending sensitivity - 1 turn around Ø20mm - 1625nm	max.1.5	dB
Proof test level	min. 0.69	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; 1285nm - 1330 nm	max. 3.2	ps/nm.km
Chromatic dispersion; 1550nm	max. 17	ps/nm.km
Chromatic dispersion; 1625nm	max. 21	ps/nm.km
Polarisation mode dispersion; maximum individual fibre	max. 0.1	ps/√km
PMDq	max. 0.06	ps/√km
Max. attenuation at 1383nm (α_{1383}) [note a]	<max. α_{1310}	-
Effective Group Core Refractive Index; 1310 nm	1.4671	-
Effective Group Core Refractive Index; 1550 nm	1.4675	-
Effective Group Core Refractive Index; 1625 nm	1.4680	-

note a: after hydrogen ageing