



AIAI

Tight reinforced with double sheath

Non metallic, double dielectric

12 or 24 fiber

Application:

Optical cable for industry, ship and offshore environments. The cable is suitable for both indoor and outdoor use. Double jacket with glass yarn in between, makes the cable mechanically strong without use of metal, and therefore suitable for installation together with Cu-cable. The waterblocking glass yarns makes the cable waterproof.

Specifications:

Temperature installed:	-30 to +70 [°C]
Temperature @ installation:	-10 to +50 [°C]
Temperature storage:	-40 to +70 [°C]
Tensile perf.: (IEC60794-1-2-E1)	2000 [N]
Crush: (IEC60794-1-2-E3)	2000 [N]
Impact: (IEC60794-1-2-E4)	20 [J]
Water penetration: (IEC60794-1-2-F5)	No water leakage (limited to inner sheath)
Min. bending radius static:	10 x outer diam
Min. bending radius static:	15 x outer diam

Norm:

- Halogen acid emission $\leq 0,3\%$ when tested acc. to IEC 60754-1/2
- Degree of acidity of gases evolved during of the combustion (pH value $\geq 4,3$ and Conductivity $\leq 10\mu\text{S}/\text{mm}$) when tested acc. to IEC 60754-1/2
- Smoke emission (Transmittance) $\geq 60\%$ when tested acc. to IEC 61034-1 and IEC 61034-2
- Fire propagation complying with IEC 60332-3-24 and IEC 60332-1-2

Approvals: DNV- and ABS-certified

Construction:

Optical core:	Tight buffered, nom. $\varnothing=0,9\text{mm}$	
Color of fiber:	1 - blue	13 - blue + black ring
	2 - orange	14 - orange + black ring
	3 - green	15 - green + black ring
	4 - brown	16 - brown + black ring
	5 - grey	17 - grey + black ring
	6 - white	18 - white + black ring
	7 - red	19 - red + black ring
	8 - black	20 - yellow + black ring
	9 - yellow	21 - violet + black ring
	10 - violet	22 - pink + black ring
	11 - pink	23 - turquoise + black ring
	12 - turquoise	24 - white + double black ring

Protection/dielectric: Waterblocking glass yarns

Inner sheath: Black LSZH compound, thickness 1,2mm
 $\varnothing=6,7\text{mm}$ 12 fibre
 $\varnothing=8,5\text{mm}$ 24 fibre

Protection/dielectric: Glass yarns

Outer Sheath: Black LSZH, UV-resistant compound, thickness 1,3mm

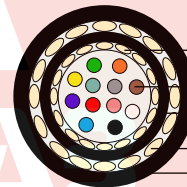
$\varnothing=10,3\text{mm}$ 12 fibre

$\varnothing=12,1\text{mm}$ 24 fibre

12 fibre: 115 kg/km

24 fibre: 160 kg/km

Weight:



Waterblocking glass yarn

Fiber

Inner sheath

Glass yarn

Outer sheath

Multimode fibres			MM 62.5 IEC 60793-2-10	MM50 ITU-T G651.1 IEC 60793-2-10	MM50-OM3 ISO/IEC 11801 IEC 60793-2-10	MM50-OM4 ISO/IEC 11801 IEC 60793-2-10
			Type A1b Telecordia GR-20-core	Type A1a.1 Telecordia GR-20-core	Type A1a.2 Telecordia GR-20-core	Type A1a.2 Telecordia GR-20-core
ITU-T type			-	G 651	-	-
Core Diameter		µm	62.5 ± 2	50 ± 2	50 ± 2	50 ± 2
Core non-circularity		%	≤ 5	≤ 5	≤ 5	≤ 5
Cladding Diameter		µm	125 ± 1,0	125 ± 1,0	125 ± 1,0	125 ± 1,0
Coating Diameter		µm	245 ± 5	242 ± 5	242 ± 5	242 ± 5
Cladding non-circularity		%	0,7	0,7	0,7	0,7
Core/cladding concentricity error		µm	≤ 1,0	≤ 1,0	≤ 1,0	≤ 1,0
Coating/cladding concentricity error		µm	≤ 10	≤ 6	≤ 6	≤ 6
Numerical Aperture		µm	0.275 ± 0.015	0.200 ± 0.015	0.200 ± 0.015	0.200 ± 0.015
Proof test		kpsi	≥ 100	≥ 100	≥ 100	≥ 100
Attenuation	at 850 nm	db/km (max)	≤ 3,5	≤ 2,8	≤ 2,8	≤ 2,8
	at 1300 nm	db/km (max)	≤ 1,0	≤ 0,8	≤ 0,8	≤ 0,8
Bandwith	at 850 nm	MHz x km	≥ 200	≥ 500	≥ 1500	≥ 3500
	at 1300 nm	MHz x km	≥ 500	≥ 500	≥ 500	≥ 500

Single mode fibres			Single mode SMR 9/125/250	Single mode SMR LWP 9/125/250	Non-zero Dispersion
ITU-T type			G652.B	G652.D	G655
Mode Field diameter (MDF)	at 1310 nm	µm	9.2 ± 0.4	9.2 ± 0.4	-
	at 1550 nm	µm	-	-	9.2 ± 0.5
Cladding Diameter		µm	125 ± 1	125 ± 0.7	125 ± 1
Coating Diameter		µm	245 ± 10	245 ± 5	245 ± 10
Attenuation	at 1310 nm	db/km (max)	≤ 0.38	≤ 0.35	-
	at 1383 nm	db/km (max)	-	≤ 0.33	-
	at 1550 nm	db/km (max)	≤ 0.25	≤ 0.25	≤ 0.25
	at 1625 nm	db/km (max)	-	≤ 0.28	≤ 0.28
Zero dispersion wavelength		λ ₀	1302 - 1322	1302 - 1322	-
Chromatic Dispersion	at 1285 - 1330nm	ps/nm x km	≤ 0.35	≤ 0.35	-
	at 1550 nm	ps/nm x km	≤ 18.0	≤ 18.0	-
	at 1530 - 1565 nm	ps/nm x km	-	-	5.5 to 10.0
PDM	at 1565 - 1625 nm	ps/nm x km	-	-	7.5 to 13.0
	at 1550 nm	ps/vkm	-	-	≤ 0.20