



AIAI up to 24 fibers, tight buffered, armoured dielectric, SHF1, Fire Retardant IEC60332-3-22 Cat.A



Store at : -40 to +70 °C

Install at : -10 to +50 °C, **Bend minimum :** 15 times : O.D.

Operate at : -30 to +70 °C, **Bend minimum :** 10 times O.D.

Crush maximum : 2000N/100mm

Impact maximum : 25J

Design

Bare fiber : 250µm

Buffer : 900µm tight buffer

Colour code : See table

Cable core : up to 24 tight buffered fibers are stranded together. The core is filled with waterblocking glass yarns.

Inner sheath : black SHF1 material

Armour : antirodent glass yarns. Coverage ≥80%.

Outer jacket : black SHF1 UV-Resistant material, LSZH

Marking : APS Finland ww/mm – Fiber Optic Cable AIAI “fiber count and type” – SHF1 IEC60332-3-22 Cat A – TK/lot + meter

Environmental properties and Fire Performances

Degree of acidity of gases : IEC 60754-1, IEC 60754-2 (pH value $\geq 4,3$ and Conductivity $\leq 10\mu\text{S/mm}$)

Halogen acid gas : IEC 60754-1, IEC 60754-2 (Halogen acid gas emission $\leq 0.5\%$)

Smoke Emission : IEC 61034-2, EN 50268-2 (Transmittance) $\geq 60\%$)

Toxicity of evolved gas : EN 50305 9.2

Flame retardant : IEC 60332-1-2

Fire retardant : IEC 60332-3-22 Cat.A

Fire resistant : NO

Ozone resistant : upon request

Weather resistant : upon request

LSZH SHF2 : upon request

Oil resistant : intermittent splash – permanent resistance available upon request

MUD resistant : upon request

Water absorption : IEC60502

Water penetration : IEC 60794-1-2-F5-B (inner core only)

UV resistant : IEC60811-2-1, ASTM-D-2565-92A

Ordering and delivery information

Fiber count	SM	OM1	OM2	OM3	OM4	Packaging
2	OAlAl02S21	OAlAl02M11	OAlAl02M21	OAlAl02M31	OAlAl02M41	drum 2000m (+/-5%)
4	OAlAl04S21	OAlAl04M11	OAlAl04M21	OAlAl04M31	OAlAl04M41	drum 2000m (+/-5%)
8	OAlAl08S21	OAlAl08M11	OAlAl08M21	OAlAl08M31	OAlAl08M41	drum 2000m (+/-5%)
12	OAlAl12S21	OAlAl12M11	OAlAl12M21	OAlAl12M31	OAlAl12M41	drum 2000m (+/-5%)
24	OAlAl24S21	OAlAl24M11	OAlAl24M21	OAlAl24M31	OAlAl24M41	drum 2000m (+/-5%)

Colour code of fibers

Tube	2 fibers	4 fibers	8 fibers	12 fibers	24 fibers	48 fibers
1	Red (2 fibers)	Red (2 fibers)	Red (4 fibers)	Red (4 fibers)	Red (6 fibers)	Red (12 fibers)
2	Filler	Green (2 fibers)	Green (4 fibers)	Green (4 fibers)	Green (6 fibers)	Green (12 fibers)
3	Filler	Filler	Filler	Natural (4 fibers)	Natural (6 fibers)	Natural (12 fibers)
Tube	2 fibers	4 fibers	8 fibers	12 fibers	24 fibers	48 fibers
4	Filler	Filler	Filler	Filler	Natural (6 fibers)	Natural (12 fibers)
5	Filler	Filler	Filler	Filler	Filler	Filler
6	Filler	Filler	Filler	Filler	Filler	Filler

Features

Fiber count	Inner jacket thickness (mm)	Inner jacket diameter (mm)	Outer jacket thickness (mm)	Cable Diameter (mm)	Cable weight (kg/km)	Pulling tension (N)
2	1.0	4.8	1.0	8.0	95	1000
4	1.0	5.2	1.0	8.5	105	1000
8	1.0	6.0	1.0	9.4	125	1000
12	1.2	6.7	1.3	10.3	145	1500
24	1.2	8.5	1.3	12.1	185	2000

Other standards of reference

IEC 60092-370	Electrical installations in ships: Guidance on the selection of cables for telecommunication and data.
DNV TAP 827.50/1	Type Approval Program - Optical Fibre Cables
ABS SVR	Rules for building and classing. Steel Vessels.
ABS SMR	Rules for building and classing. Steel vessels under 90 meters.
IEC 60793	General specifications for both multimode and single-mode optical fibres
IEC 60794	general specifications for optical fibres cables

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