

CABLE

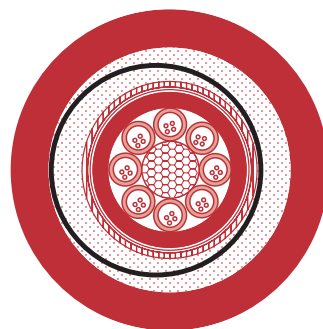
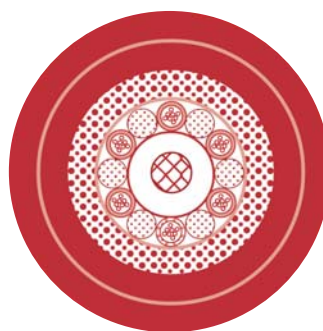


Enhanced Fire Performance Optical Cables



- > **Improved levels of safety and operational reliability**
- > **No production of fumes and toxic emissions**
- > **Enhanced transmission performance**

A complete range of enhanced fire performance optical cables



Enhanced Fire Performance Optical Cables



A complete range of enhanced fire performance optical cables providing improved levels of safety and operational reliability, with respect to:

- Flame Propagation.
- Smoke Emission.
- Toxic/Corrosive Gas Emission.
- and
- Fire Resistance.

For over 10 years Prysmian has offered Afumex Low Smoke Zero Halogen (LSOH) as a jacketing material providing excellent characteristics of reduced flame propagation and reduced emission of smoke and corrosive/toxic fumes in the presence of fire.

Afumex jacketed cables provide the necessary levels of safety in critical environments such as railway tunnels, subways, public buildings, telephone exchanges etc by avoiding the production of fumes and corrosive/toxic emissions that pose severe health risks and which can also damage sensitive electronic equipment. In particular our current Afumex jacketed cables meet the following International Standards:

- Flame Propagation: IEC 60332-3-22, IEC 60332-3-24
- Smoke emission: IEC 61034-2
- Toxic/Corrosive Gas Emission: IEC 60754-2

Compliance with these Standards does not, however, guarantee any level of continued transmission performance of the optical fibres within the cable.

Prysmian has now taken a significant step forward with the introduction of a new family of 'Fire Resistant' optical cables. These maintain all of the previous performance characteristics listed above but now allow the cables to maintain their optical transmission characteristics for a specified time period in compliance with International standards:

- Fire Resistance: IEC 60331-25, IEC 60331-31
EN 50200, DIN 4102 Part 12

This enhanced level of performance has particular relevance for cables in fire affected environments where uninterrupted transmission is needed for operation of emergency devices such as phones, automatic doors, building management systems and fire alarms.

Compliance with the Fire Resistance Standard has been achieved through a combination of design, dimensional and material changes such that Prysmian is now able to offer this range of products which meet fire resistance standards, in addition to flame spread and smoke emission standards.



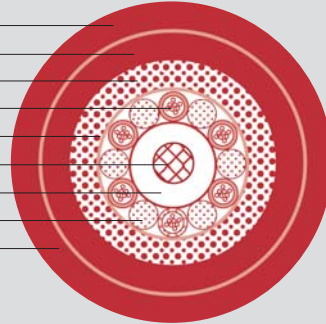


CROSS SECTION DRAWING

Typical fire resistant dielectric optical cable

Optical cable loose tube design, non-metallic central element, protected by peripheral strength member and double flame retardant low smoke zero halogen sheath.

- Outer flame retardant LSOH sheath
- Inner flame retardant LSOH sheath
- Glass yarns
- Optical fibre
- Fire resistant tape
- Dielectric rod central element
- Flame retardant compound covering
- Glass fillers
- Fire resistant tape

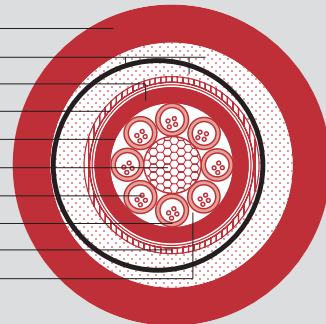


CROSS SECTION DRAWING

Typical fire resistant armoured optical cable

Optical cable loose tube design, non-metallic central element, inner sheath, peripheral strength members, corrugated longitudinally welded steel tape, outer flame retardant low smoke sheath.

- Outer flame retardant sheath
- Corrugated steel tape, longitudinally welded
- Inner sheath
- Aramid strength members
- Fire resistant tape
- Dielectric glass rod
- Optical fibre
- Filled loose tube
- Wrapping tape
- Flooding compound



DESIGN PARAMETERS

Cable type

	Dielectric	Armoured
Fibre count	up to 72	upt to 72
Nominal outer diameter mm	22	21.5
Nominal cable weight (kg/km)	540	520

PERFORMANCE

Tensile load (IEC 60794-1-2,E1) during installation	N	3500	3000
Temperatures Operation °C		-30/+70	
Temperatures Installation °C		-10/+50	
Temperatures Storage °C		-40/+70	
Bending radius static	mm	350	
Vertical flame spread (according to IEC 60332-3-24)		pass	pass
Horizontal fire resistance (according to IEC 60331-25)		pass	pass
Fire test on "cable system" (according to DIN 4102 part 12)		pass	
Fire resistance with shock (according to EN 50200)			pass

Any questions? Our team of experienced technical staff is ready to talk to you. See contact details.

