

512 OPTICAL FIBRES CABLE FOR DUCT INSTALLATION - KP TYPE



Optical fibre



Dielectric



Water blocked



UV resistant



ROHS compliant

STANDARDS

Construction: Telefónica standard ERQ.f6.0227- Edition 1

Fibre: ITU-T G652D

DESCRIPTION AND APPLICATION

Loose tube single mode Optical Cable, totally dielectric with 512 fibres. The tubes are filled with a thixotropic filling compound. Waterblocking between the tubes is achieved by swellable dry elements. The core is protected by an aramid reinforced PE sheath. Installation in ducts by pulling or blowing.

CONSTRUCTION

- **Central reinforcing element:** Dielectric fibreglass (FRP).
- **Loose tubes:** PBT loose tubes filled with thixotropic compound with 32 optic fibres. Colour coding of tubes and fibres according to tables 1 and 2.
- **Core formation:** Loose tubes stranded in SZ. Swellable yarns and tapes to avoid water penetration and make the cable waterproof.
- **Reinforcement:** Aramid yarns as reinforcing element.
- **Outer sheath:** Black polyethylene, UV resistant.
- **Sheath marking :** The cable sheath will be marked with white ink at regular intervals with the following information :
 - *CABLESCOM / year / Number of fibres MN/batch number/Single mode fibre (MN)/ sheath type (KP) /length markings*
 - *Other sheath marks available upon request*



OPTICAL FIBRE CHARACTERISTICS

The parameters of the optical fibres are compliant with the ITU-T G.652D recommendation.

See our fibre product sheet for the characteristics of the fibre

Optical transmission characteristics of cabled fibre ::

Attenuation coefficient:

Average / maximum at 1310 nm: 0,36 / 0,38 dB/km

Average / maximum at 1550 nm: 0,22 / 0,26 dB/km

$PMD \leq 0,20 \text{ ps/km}^{1/2}$

$PMD \text{ link} \leq 0,10 \text{ ps/km}^{1/2}$

Cut-off wavelength (λ_{cc}) $\leq 1260\text{nm}$

All drawings, designs, specifications and particulars of weights, dimensions, etc. in this documentation are only indicative and must not be considered contractual.

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TABLE 1: LOOSE TUBES COLOUR CODE

	Number of tubes in layer											
	1	2	3	4	5	6	7	8	9	10	11	12
1 st Layer	White	Red	Black	Blue	Verde	Black						
2 nd layer	White	White	White	Red	Red	Red	Blue	Blue	Blue	Green	Green	Green

*Note: Black tubes are fillers

TABLE 2: OPTICAL FIBERS COLOUR CODE

Fibre	Colour	Fibre	Colour
1	Green	17	Green **
2	Red	18	Red **
3	Blue	19	Blue **
4	Yellow	20	Yellow**
5	Grey	21	Grey **
6	Violet	22	Violet **
7	Brown	23	White **
8	Orange	24	Orange **
9	Green *	25	Green ***
10	Red *	26	Red ***
11	Blue*	27	Blue ***
12	Yellow *	28	Yellow ***
13	Grey *	29	Grey ***
14	Violet *	30	Violet ***
15	White *	31	White ***
16	Orange *	32	Orange ***

(*): fibres from 9 to 16 are marked with a black ring approximately every 50 mm.

(**): fibres from 17 to 24 are marked with a double black ring approximately every 50 mm.

(* **): Fibres from 25 to 32 are marked with a triple black ring approximately every 50 mm.

MECHANICAL CHARACTERISTICS	Specifications	Test conditions
Tensile strength ($\Delta\epsilon=0\%$, $\Delta\alpha<0.05$ dB)	EN 187000, Met. 501	3500 N
Maximum tensile strength ($\Delta\epsilon<0,33\%$, $\Delta\alpha$ reversible)		6500N
Impact resistance ($\Delta\alpha<0.05$ dB)	EN 187000, Met. 505	5J, R = 10mm
Crush resistance ($\Delta\alpha<0.05$ dB)	EN 187000, Met. 504	2000 N
Static bending ($\Delta\alpha<0.05$ dB)	EN 187000, Met. 513	r =15d mm, 3 cycles
Repeated bending ($\Delta\alpha<0.05$ dB)	EN 187000, Met. 507	r =15d mm, 100 cycles
Torsion test ($\Delta\alpha<0.05$ dB)	EN 187000, Met. 507	$\pm 360^\circ$, 100 N, 5 cycles
Temperature cycling (operation, $\Delta\alpha<0.05$ dB)	EN 187000, Met. 601	-25°C / +70°C Cycles=4
Water penetration	EN 187000, Met. 605B	LP _{water} = 1 m (14 days)

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DIMENSIONS AND WEIGHT

Code	No. fibres	Diameter (mm)	Nominal weight (kg/km)
EE6102N00051202N	512	22,0	330

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