

## OPTICAL FIBRES CABLE, TYPE PKP



Optic fibre



Overhead line cable



UV resistant



Impact resistant



NO METAL



Water Blocked



ROHS Compliant

## STANDARDS

Telefónica Specification ERQ.f6.0226 – 1<sup>th</sup> Edition  
Fibre: ITU-T G652D.

## DESCRIPTION AND APPLICATION

8 to 256 single mode optical fibers cables, totally dielectric, with PKP sheath for installation in outside plant underground conduits both as overhead lines.

## CONSTRUCTION

- **Central element:** Fiber-glass reinforced plastic central element.
- **Loose tubes:** PBT loose tubes fibres with thixotropic compound and containing single mode optical fibres according to ITU-T G.652 D. 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.
- **Inner sheath:** Polyethylene.
- **Mechanical reinforcement:** Aramid yarns as traction resistant.
- **Outer jacket:** Black polyethylene sheath.
- **Sheath marking:** The cables will be marked with the following information
  - manufacturer's name (CCSA) / Year manufacture / N<sup>o</sup> fibre / fibre type / sheath type / TELEFONICA / Footage / Manufacturing Order
  - Other marks are available on request



## OPTICAL FIBRE CHARACTERISTICS

The parameters of the optical fibre used in these cables meet the ITU-T recommendation G.652D.

See our fibre product for the characteristics of the fibre.

**Optical transmission characteristics of cabled fibre :**

Attenuation coefficient:

Average/ maximum at 1310 nm: 0,35 / 0,37 dB/km

Average/ Maximum at 1550 nm: 0,21 / 0,30 dB/km

PMD link  $\leq 0,10$  ps/km<sup>1/2</sup>

PMD Q  $\leq 0,06$  ps/km<sup>1/2</sup>

Cut-off wavelength ( $\lambda_{cc}$ )  $\leq 1260$ 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

		Fibres in Cable										
# Fibre		8	16	24	32	48	64	96	128	144	192	256
1st Layer	1	White	White	White	White	White	White	White	White	White	White	White
	2	Red	Red	White	Red	White	White	White	Red	White	White	Red
	3	Black	Black	Red	Black	Red	Red	White	Black	Red	White	Black
	4	Blue	Blue	Red	Blue	Red	Red	Red	Blue	Red	Red	Blue
	5	Green	Green	Blue	Green	Blue	Blue	Red	Green	Blue	Red	Green
	6	Black	Black	Blue	Black	Blue	Blue	Red	Black	Blue	Red	Black
	7						Green	Blue			Blue	
	8						Green	Blue			Blue	
	9							Blue			Blue	
	10							Green			Green	
	11							Green			Green	
	12							Green			Green	
2nd Layer	1								White	White		White
	2								White	White		White
	3								White	White		White
	4								Red	Red		Red
	5								Red	Red		Red
	6								Red	Red		Red
	7								Blue	Blue		Blue
	8								Blue	Blue		Blue
	9								Blue	Blue		Blue
	10								Green	Green		Green
	11								Green	Green		Green
	12								Green	Green		Green
Fibres per tube		2	2	4	4	8	8	8	8	8	16	16

\* Note: The black tubes are passive elements (no fibre)

TABLE 2: OPTICAL FIBERS COLOUR CODE

<b>Fibre</b>	1	2	3	4	5	6	7	8	9	10	11	12
<b>Colour</b>	Green	Red	Blue	Yellow	Grey	Violet	Brown	Orange	White	Black	Pink	Turquoise
<b>Abrev.</b>	Gr	Rd	Bl	Ye	Gy	Vi	Br	Or	Wh	Bl	Tq	Rs
<b>Fibre</b>	13	14	15	16								
<b>Colour</b>	White*	Yellow*	Orange*	Pink*								
<b>Abrev.</b>	W	Ye	Or	P								

(\*): The fibres 13 to 16 are marked with black rings separated up to 50 mm apart.

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MECHANICAL CHARACTERISTICS	Standards	Test Conditions
<i>Minimum tensile strength</i>	EN 187000 Mét. 501	4200 N
<i>Crush resistant (<math>\Delta\alpha &lt; 0.05</math> dB)</i>	EN 187000 Mét. 504	3000N
<i>Impact Resistant (<math>\Delta\alpha &lt; 0.05</math> dB)</i>	EN 187000 Mét. 505	5 J, striking radius = 10mm
<i>Curvature (<math>\Delta\alpha &lt; 0.05</math> dB)</i>	EN 187000 Mét. 513	$r = 15 \times \varnothing$ cable; $r \geq 250$ mm
<i>Temperature cycling (operation, <math>\Delta\alpha &lt; 0.05</math> dB)</i>	EN 187000 Mét. 601	-25°C / 70°C
<i>Water penetration</i>	EN 187000 Mét. 605B	$L_{\text{Pwater}} \leq 1$ m (14 days)

## DIMENSIONS AND WEIGHTS

Code	# Fibre	Diameter(mm)	Nominal Weight (kg/km)
EE6102A00000802N	8	14,3	155
EE6102A00001602N	16	14,3	155
EE6102A00002402N	24	14,3	155
EE6102A00003202N	32	14,3	155
EE6102A00004802N	48	14,3	155
EE6102A00006402N	64	16,0	180
EE6102A00009602N	96	18,4	255
EE6102A00012802N	128	19,2	265
EE6102A00014402N	144	19,1	265
EE6102A00019202N	192	19,8	290
EE6102A00025602N	256	20,4	300

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