

INDOOR USE, LSZH OPTICAL FIBRES CABLE. TYPE TKT



Optic Fibre



Uv resistant

Flame
retardantLow smoke
emission

Dielectric

Impact
resistant

Halogen free

ROHS
Compliant

STANDARDS

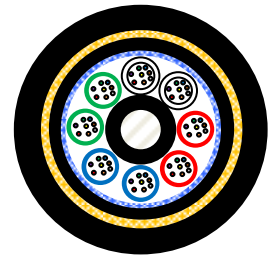
Telefónica specification ERQ.f6.0211– 1st Edition.
Fibre: ITU-T G652D.

DESCRIPTION AND APPLICATION

4 to 256 single mode optical fibers cables, totally dielectric, with TKT sheath for installation in tunnels or in cable galleries. May also be installed inside buildings or canalizations.

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:** thermoplastic flame retardant, low smoke and halogen free.
- **Mechanical reinforcement:** Aramid yarns as traction resistant.
- **Outer sheath:** Black coloured LSZH compound.
- **Sheath marking:** The cables will be marked with the following information
 - Company name (CCSA) / Year manufacture / Number of fibres / fibre type / sheath type / TELEFONICA / Order manufacturing / Footage
 - 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/ Máximum a 1310 nm: 0,35 / 0,37 dB/km

Average / Máximum a 1550 nm: 0,21 / 0,30 dB/km

PMD link $\leq 0,15 \text{ ps/km}^{1/2}$

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

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

		Fibres in cable												
Nº		4	6	8	12	16	24	32	48	64	96	128	144	256
1st Layer	1	White	White	White	White	White	White	White	White	White	White	White	White	White
	2	Black	Black	Red	Blanco	Red	Blanco	Red	Blanco	Blanco	Blanco	Red	Blanco	Red
	3	Black	Red	Negro	Red	Black	Red	Black	Red	Red	Blanco	Black	Red	Black
	4	Red	Black	Blue	Red	Blue	Red	Blue	Red	Red	Red	Blue	Red	Blue
	5	Black	Blue	Green	Blue	Green	Blue	Green	Blue	Blue	Red	Green	Blue	Green
	6	Black	Black	Black	Blue	Black	Blue	Black	Blue	Blue	Red	Black	Blue	Black
	7									Green	Blue			
	8									Green	Blue			
	9										Blue			
	10										Green			
	11										Green			
	12										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
Fibras		2	2	2	2	4	4	8	8	8	8	8	8	16

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

TABLE 2: OPTICAL FIBERS COLOUR CODE

Fibre Colour	1	2	3	4	5	6	7	8	9	10	11	12
Abrev.	Gr	Rd	Bl	Ye	Gy	Vi	Br	Or	Wh	Bl	Tq	Rs
Fibre Colour	13	14	15	16								
Abrev.	White*	Yellow*	Orange*	Pink*								
	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
Tensile strength ($\Delta\epsilon \leq 0,33\%$)	EN 187000 Met. 501	2700 N
Crush resistance ($\Delta\alpha < 0.05$ dB)	EN 187000 Met. 504	1500N
Impact resistance ($\Delta\alpha < 0.05$ dB)	EN 187000 Met. 505	5 J, striking radius = 10mm
Curvature ($\Delta\alpha < 0.05$ dB)	EN 187000 Met. 513	$r = 15 \times \varnothing$ cable; $r \geq 250$ mm
Temperature cycling (operation, $\Delta\alpha < 0.05$ dB)	EN 187000 Met. 601	-25°C / 70°C
Water penetration	EN 187000 Met. 605B	LPwater ≤ 1 m (14 days)
Flame retardancy	EN 50265-1	Pass
Corrosivity of the smoke	EN 50267-2-1	pH $\geq 4,3$; Conduct ≤ 10 $\mu\text{s}/\text{mm}$
Smoke density	EN 50268-1	Transmittance $> 50\%$

DIMENSIONS AND WEIGHTS

Code	# fibre	Diameter(mm)	Nominal Weight (kg/km)
EE6102F00000402N	4	13,0	175
EE6102F00000602N	6	13,0	175
EE6102F00000802N	8	13,0	175
EE6102F00001202N	12	13,0	175
EE6102F00001602N	16	13,0	175
EE6102F00002402N	24	13,0	175
EE6102F00003202N	32	13,0	175
EE6102F00004802N	48	13,0	175
EE6102F00006402N	64	14,7	220
EE6102F00009602N	96	17,7	300
EE6102F00012802N	128	18,6	315
EE6102F00014402N	144	18,6	315
EE6102F00025602N	256	20,3	370

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