

FIBRE OPTIC DIELECTRIC ARMoured CABLE – REPSOL STANDARD



Optical fibre

ROHS
compliant

STANDARDS

Cable construction: IEC 60794 ; ED-J-16.00-01

Fibres: ITU-T G652 D.

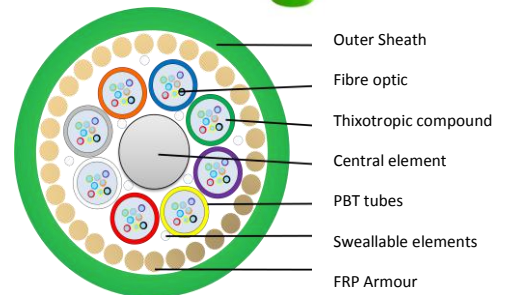
DESCRIPTION AND APPLICATION

Loose tube single mode or multimode optical fibre cables with central dielectric strength element. The core is protected by an armour of round dielectric fibre glass elements and a LSZH sheath.

These cables can be used in petro-chemical industries.

CONSTRUCTION

- **Central reinforcing element:** Dielectric fibreglass (FRP).
- **Loose tubes:** PBT loose tubes filled with thixotropic compound. Colour coding of tubes and fibres according to tables 1 and 2.
- **Core formation:** Loose tubes stranded in SZ. Sweallable yarns and tapes to avoid water penetration and make the cable waterproof.
- **Armouring:** Dielectric rod 1mm fibreglass (FRP), which provides protection against rodents.
- **Outer jacket:** Green LSZH, UV resistant polyethylene.
- **Sheath marking :** The cable sheath will be marked with white ink at regular intervals with the following information :
 - *CABLESCOM / year / Number of fibres MN/ PSP / batch number*
 - *+length markings*
 - *Other sheath marks available upon request*



OPTICAL FIBRE CHARACTERISTICS

Monomode 9/125 G652D, According "SM09 G652D_i - Datasheet".

Multimode de 50/125 OM2, According "MM50 OM2 G651_i - Datasheet".

Multimode 62,5 / 125 OM1, According "MM62 OM1_i - Datasheet".

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

		No fibres in the cable				
		8	16	32	64	128
1st Layer	Tube	8	16	32	64	128
	1	Blue	White	White	Blue	Blue
	2	Green	Red	Red	Green	Green
	3	Black	Black	Black	Violet	Black
	4	Black	Yellow	Yellow	Yellow	Yellow
	5	Black	Red	Red	Red	Red
	6	Black	Black	Black	White	Black
	7				Grey	
8				Orange		
2nd Layer	1					Blue
	2					Green
	3					Violet
	4					Yellow
	5					Red
	6					White
	7					Grey
	8					Orange
	9					Turquoise
	10					Brown
	11					Pink
	12					Black
Fibres per tube		4	4	8	8	8

**Note: The black tubes are fillers*

TABLE 2: OPTICAL FIBERS COLOUR CODE

Fiber	1	2	3	4	5	6	7	8
Color	Green	Red	Yellow	Blue	White	Grey	Orange	Black
Abrev.	Gr	Rd	Ye	Bl	Wh	Gr	Or	Bk

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MECHANICAL CHARACTERISTICS	Method	Test Conditions
Tensile strength ($\Delta\epsilon_{fibre} \leq 0,33\%$)	IEC 60794-1-2 Met E1A	1500 N
Crush resistance ($\Delta\alpha < 0.05$ dB)	IEC 60794-1-2 Met E3	2500 N
Curvature ($\Delta\alpha < 0.05$ dB)	IEC 60794-1-2 Met E11	$r = 20 \times$ cable diameter
Water penetration	IEC 60794-1-2 Met F5B	$L_{pwater} \leq 3$ m (1 day)
Temperature cycling (operation, $\Delta\alpha < 0.05$ dB)	IEC 60794-1-2 Met F1	-25°C / 75°C
Flame Retardant	IEC 60332-1-2	$L_{pwater} \leq 3$ m (1 day)
Smoke density	IEC 61034-1-2	
Zero Halongen	IEC 60754-1-2	

# fibres	Diameter (mm)	Nominal Weight (kg/km)
8-16-32	12,6	182
64	14,2	220
128	18,6	312

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