

DESCRIPTION AND APPLICATION

Fibre-optic ADSS cable with dielectric reinforcement elements and high density polyethylene sheath. This cable is designed for long aerial self-supported installations in poles along with overhead, telecommunication or high voltage transmission lines. It contains 6, 8 or 11 loose tubes of 12, 24 or 36 fibres each.

These cables are used for medium or long distance telecommunications networks designed with single mode fibre type ITU-T G 657A1 of 250µm, for cables from 12 to 144 fibres and G657A1 200µm for cables of 192, 288 and 396 fibres. Generally according to INFRADEL specification INF-ING-2017-008 v2.0 of 21/01/2019.

CONSTRUCTION

- Central element:** Fibre-glass reinforced plastic rod.
- Loose Tubes:** PBT loose tubes filled with thixotropic compound. Optional fillers depending on the cable structure. Colour coding according to tables below.
- Core formation:** Tubes are stranded in SZ.
- Core wrapping:** Water-blocking tape and/or yarns to avoid water propagation.
- Inner sheath:** Grey RAL7001 or black HDPE, nominal thickness 0.8 mm.
- Armour:** Aramid yarns for traction reinforcement. (≥280000 dtex)
- Outer sheath:** Grey RAL7001 or black HDPE, UV resistant outer jacket, nominal thickness 1,5 mm.
- Marking:** The outer sheath shall be marked, at regular intervals, with the following information:
CABLESCOM – CAVO OTTICO – TOLXD nf nt(n SM G657A1) T/EKE/S – INF-ING-2017-008 v2.0 – AENOR – Year – Batch number - Fibre supplier – Length marks

Example of sheath marking: Cavo ottico 396 fibre ottico:

CABLESCOM CAVO OTTICO TOL11D 396 11(36 SM G657A1) T/EKE/S – INF-ING-2017-008 V2-AENOR-2019 xxxxxx-AOF YYYYm

LOOSE TUBE AND OPTICAL FIBRE COLOUR CODE

Fibre Colour	1	2	3	4	5	6	7	8	9	10	11	12
	Red	Green	Yellow	Brown	Blue	Violet	Grey	Orange	Rose	White	Black	Turquoise

*Fibers from 13 to 24 will be marked with one black ring each 50 mm.

*Fibers from 25 to 36 will be marked with two black rings each 50 mm.

* In case of the black fiber, this could be natural fiber with one or two black rings.

Tube	Tube colour	Direction
1	Red	Green
2	Green	White
3	White	Following white
n	White	Red

Filling rods, in natural colour



PRODUCT INFORMATION

CABLE FIBRES		24	48	96	144	192	288	396
Nominal OD (mm)		14.0	14.0	14.0	14.0	15.1	15.1	18.0
Nominal weight (kg/km)		141	144	156	157	180	185	260
Tubes Num.		2	4	4	6	8	8	11
Passive Elements Num.		4	2	2	0	0	0	0
Fibres Number per Tube		12	12	24	24	24	36	36
MAX. TENSILE STRENGTH (daN) UNE-EN 60794-1-2, Met. E1 $\Delta\alpha \leq 0,1$ dB/km after test	MOT ($\Delta\epsilon_f \leq 0,05\%$)	450						
	MAT ($\Delta\epsilon_f \leq 0,25\%$)	1200						
IMPACT UNE-EN 60794-1-2, Met. E4		5 J, 300 mm, 3 impacts ; $\Delta\alpha$ reversible ($\Delta\alpha \leq 0,1$ dB/km after the test)						
CRUSH UNE-EN 60794-1-2, Met. E3		1500 N/ 10cm 1min; $\Delta\alpha$ reversible ($\Delta\alpha \leq 0.05$ dB/km after the test)						
REPEATED BENDING UNE-EN 60794-1-2, Met. E6		25 cycles: 20 x \emptyset cable $\Delta\alpha$ reversible ($\Delta\alpha \leq 0.1$ dB/km after the test)						
TORSION UNE-EN 60794-1-2, Met. E7		2m cable ; 100N ; 5 cycles ; $\pm 180^\circ$; $\Delta\alpha$ reversible ($\Delta\alpha \leq 0.1$ dB/km after the test)						
BENDING UNE-EN 60794-1-2, Met. 11		$\emptyset=20$ x \emptyset cable; 4 turns; 3 cycles, $\Delta\alpha$ reversible ($\Delta\alpha \leq 0.1$ dB/km after the test)						
TEMPERATURE CYCLING UNE-EN 60794-1-2, Met. F1		-30°C / 60°C; $\Delta\alpha < 0.05$ dB/km						
WATER PENETRATION UNE-EN 60794-1-2, Met. F5B		No leakage						
UV RESISTANCE ISO 4892-2 2013		720 hours. Raw material tested by manufacturer. Supporting document.						

All drawings, weights and dimensions details, as well as tube and fibre colours in this document are only indicative and must not be considered contractual.

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Certified Company ISO 9001 – ISO 14001

TITLE
HP_EE2M72D

EDITION
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APPROVED BY
O. Salomón

DATE
2019-04-30