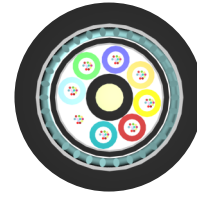
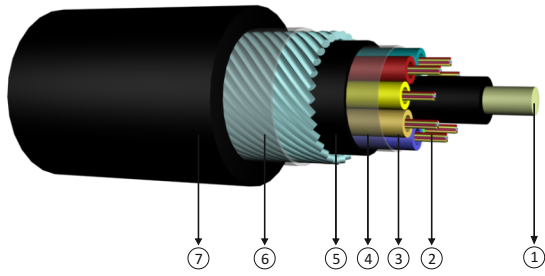


OUTDOOR CABLES | Multi Loose Tube, Steel Wire Armoured (SWA) Cables



- 1 Central Strength Member
- 2 Fiber
- 3 Loose Tube
- 4 Polyester Tape
- 5 Inner Sheath
- 6 Steel Wire Armour
- 7 Outer Sheath

Loose Tube Colors

Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise

Fiber Colors

Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink, Turquoise.

Inner Sheath : Black LDPE, Thickness nominal $0,8 \pm 0,1$ mm.

Armour : Steel Wire Armour

Outer Sheath : Black MDPE, Thickness nominal $1,5 \pm 0,1$ mm.

Applications

They are used in a pipe made of HDPE etc. materials in long range and local communication networks or directly burying in the ground.

Construction

Loose tubes are bent around FRP material with SZ twist method (or filler of any). Then they are covered with intercandinal cover using aramid / glass yarns.

Round steel wires is used as a shield. They are covered with MDPE material.

TECHNICAL PROPERTIES								
Number Of Fiber	Loose Tube Count	Number Of Fiber	Number of Fiber in Per Tube	Central Strength Member OD	Central Strength Member Coated OD	Loose Tube Outer/Inner Diameter	Cable Diameter *	Cable Weight (Kg/km) *
4	1	5	4	2,2	N/A	2,0/1,4	13,5	290
6	3	3	2	2,2	N/A	2,0/1,4	13,5	290
8	2	4	4	2,2	N/A	2,0/1,4	13,5	290
12	3	3	4	2,2	N/A	2,0/1,4	13,5	290
16	4	2	4	2,2	N/A	2,0/1,4	13,5	291
24	6	0	4	2,2	N/A	2,0/1,4	13,5	292
36	6	0	6	2,5	N/A	2,4/1,7	14,6	332
48	6	0	8	2,5	N/A	2,4/1,7	14,6	332
60	5	1	12	2,7	N/A	2,6/1,8	15,2	357
72	6	0	12	2,7	N/A	2,6/1,8	15,2	358
96	8	0	12	2,7	4,5	2,6/1,8	17,0	432
144	12	0	12	2,7	8	2,6/1,8	20,5	593

MECHANICAL AND ENVIRONMENTAL PROPERTIES		
Physical Tests	Conditions	Standard
Tensile Strength	15000 N Tensile Strength (Installation) 9000 N Tensile Strength (Operation)	IEC 60794-1-21-E1
Impact Resistance	10J, 3 impacts	IEC 60794-1-21-E4
Crush Resistance	2000 N / 10cm	IEC 60794-1-21-E3
Bend Radius (During Installation)	20x Cable Diameter	IEC 60794-1-21-E11
Bend Radius (During Service)	10x Cable Diameter	IEC 60794-1-21-E11
Operation Storage and Transportation	-40 to +70 ° C	IEC 60794-1-22-F1
Installation Temperature	-30 to +60 ° C	N/A
Water Penetration Test	N/A	IEC 60794-1-22 F5
Fire Test**	N/A	N/A

* : Tolerance $\pm 10\%$.

** : These test case apply to HFFR sheathed cables.