# Fiber Optical Cables

## HES° KABLO

### OUTDOOR CABLES | Single Loose Tube, Single Covered, Unarmoured







3 Aramid/Glass Yarn



4 Outer Sheath

#### **Loose Tube Colors**

Natural

#### **Fiber Colors**

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

Inner Sheath : N/A
Armour : N/A

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

#### **Applications**

They are used in a pipe which is made of HDPE etc. material in long range and local communication networks.

#### Construction

Painted fibers are placed in the central Loose tube. Then they are covered with MDPE material using adequate aramid/glass yarns. It has a water blocking feature.

| TECHNICAL PROPERTIES |                                       |                     |                           |
|----------------------|---------------------------------------|---------------------|---------------------------|
| Number Of<br>Fiber   | Loose Tube Outer/Inner Diameter (mm)* | Cable<br>Diameter * | Cable Weight<br>(Kg/km) * |
| 4                    | 3,0/2,0                               | 7,2                 | 45                        |
| 6                    | 3,0/2,0                               | 7,2                 | 45                        |
| 8                    | 3,0/2,0                               | 7,2                 | 45                        |
| 12                   | 3,0/2,0                               | 7,2                 | 45                        |
| 16                   | 3,0/2,0                               | 7,2                 | 45                        |
| 24                   | 3,0/2,0                               | 7,2                 | 45                        |

| MECHANICAL AND ENVIRONMENTAL PROPERTIES |  |                    |  |
|---|--|--------------------|--|
| Physical Tests                          | Conditions   | Standard           |  |
| Tensile Strength                        | 1000 N Tensile Strength (Installation)<br>800 N Tensile Strength (Operation) | IEC 60794-1-21-E1  |  |
| Impact Resistance                       | 5J, 3 impacts  | IEC 60794-1-21-E4  |  |
| Crush Resistance                        | 2000 N / 10cm  | IEC 60794-1-21-E3  |  |
| Bend Radius (During Installation)       | 30x Cable Diameter   | IEC 60794-1-21-E11 |  |
| Bend Radius (During Service)            | 15x 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                  | 24 hours 3m length   | IEC 60794-1-22 F5  |  |
| Fire Test**                             | N/A  | N/A                |  |

<sup>\* :</sup> Tolerance ±10%.

<sup>\*\* :</sup> These test case apply to HFFR sheated cables.