

**PRESENTATION**

Petroleum jelly filled cables for local distribution telecommunication networks, suitable for drawing into ducts or directly buried.

**REFERENCE STANDARDS**

UTE C 93-526 and UTE C 93-527-1

**CABLE STRUCTURE****1- Conductors**

Conductors consist of solid copper having a diameter of 0.4, 0.6 and 0.8 mm

**2- Insulation of conductors**

Conductors are insulated by a solid polyethylene layer.

Conductors having a diameter of 0.6 and 0.8 mm are insulated by a cellular polyethylene covered by a solid polyethylene layer (double insulated layer or foam skin). The thickness is such as the electrical requirements are met.

**3- Stranding**

- Element of cabling: insulated conductors are assembled in Star Quads
- Cabling elements:
  - Quads are assembled in concentric bundles having a capacity of 8 pairs, 14 pairs and 28 pairs.
  - Cables with 56 pairs are assembled in basic bundles of 14 pairs
  - Cables having a capacity higher than 56 pairs are assembled in basic bundles of 28 pairs

**4- Core wrapping**

The cable core is covered with a:

- A polyester tape
- A water blocking tape

**5- Screen**

On the cable core is applied a corrugated aluminum tape.

**6- Drain wire**

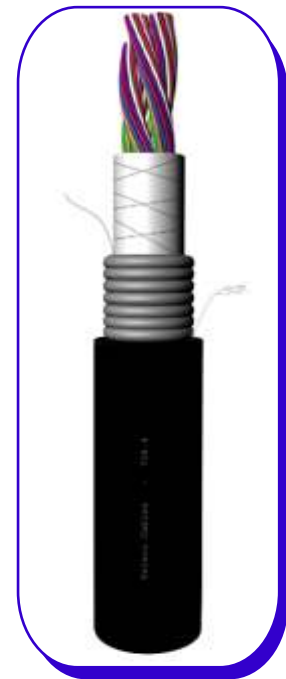
The Drain wire consists of tinned copper and has a diameter of 0.5 mm. It is set longitudinally under the metal tape and ensures the screen connection.

**7- Outer sheath**

The sheath consists of high density polyethylene. It is black and contains  $2.5 \pm 0.5$  mm of carbon black. It is complying with the European standards requirements EN 50290-2-24

**8- Cable filling**

The cable are fully filled with a high grade, high drop point, petroleum based jelly compound.



## DIMENSIONS

TYPE	Sheath thickness (mm)	Max. diameter on sheath (mm)	TYPE	Sheath thickness (mm)	Max. diameter on sheath (mm)
74 - 8 - 4	1.5	12	74 - 112 - 4	2.0	24
74 - 8 - 6	1.6	13.5	74 - 112 - 6	2.2	29
74 - 14 - 4	1.6	13.5	74 - 112 - 8	2.2	35.5
74 - 14 - 6	1.7	15.0	74 - 224 - 4	2.2	30.8
74 - 14 - 8	1.6	17.5	74 - 224 - 6	2.4	37.4
74 - 28 - 4	1.7	16.0	74 - 224 - 8	2.4	46.5
74 - 28 - 6	1.8	17.5	74 - 448 - 4	2.4	41
74 - 28 - 8	1.8	21	74 - 448 - 6	2.6	49
74 - 56 - 4	1.8	19	74 - 896 - 4	2.6	53.3
74 - 56 - 6	2.0	22.5	74 - 896 - 6	2.8	64
74 - 56 - 8	2.0	28	74 - 1792 - 4	2.8	71

## ELECTRICAL CHARACTERISTICS

### 1- Conductor electrical resistance

Conductor diameter (mm)	Individual value ( $\Omega$ /km)	Average ( $\Omega$ /km)
0,4	150	144
0,6	66,6	63,9
0,8	36,8	35,3

### 2- Voltage test

The cable Insulation of conductors resists without failure to a direct voltage for one minute. This is provided in the table below according to the conductor diameter:

Conductors diameter (mm)	Applied voltage (kV)	
	Between conductors	Between conductor and screen
0,4	0,6	1,5
0,6	1,15	1,5
0,8	1,5	2,25

### 3- Insulation resistance

The values, measured at about 20°C and at 200 V, are higher than 5000 M  $\Omega$  .km;

### 4- Mutual capacitance

Number of pairs	Average value (nF/km)	Individual value (nF/km)
4	60,0	62,0
Between 8 and 14 pairs	55,0	57,5
28 pairs	55,0	57,5
Beyond 2_ pairs	52,5	57,5

### 5- Capacitance unbalance

At about 20°C and a frequency of 800Hz , do not exceed the following individual limits:

Individual value (pF/km)	Cable length (m)	Average value (pF/km)
300	70	175
600	100	300
1200	150	500

### 6- Attenuation (approximately)

The values, measured at about 20°C and a frequency of 800MHz, do not exceed the following maximum limits:

Diameter conductor (mm)	Individual value (dB/km)
0,4	1,79
0,6	1,19
0,8	0,90