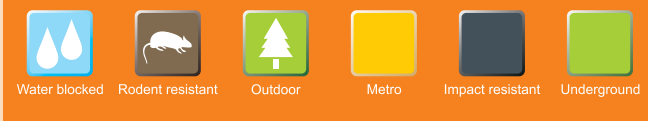
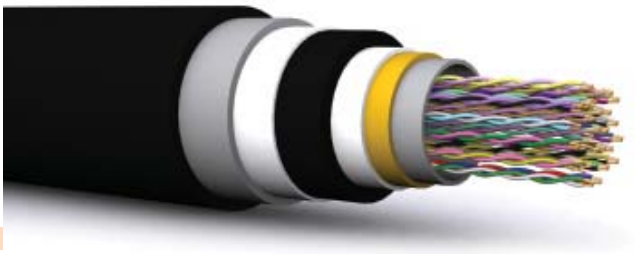
Foam Skin / Solid PE Insulated Jelly Filled Telephone Cable

Foam Skin / Solid PE Insulated Jelly Filled (PIJF) cables provide excellent transmission performance in variety of field environment.



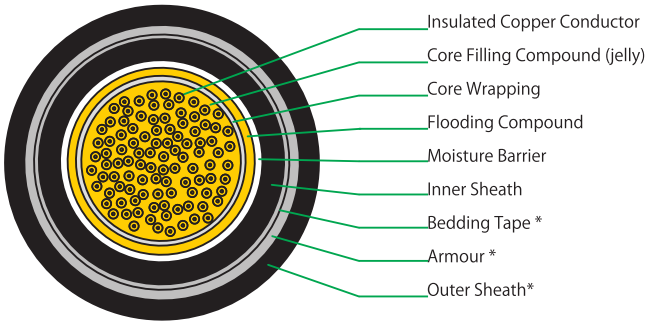
Applications:

- Duct application
- Direct burial application
- Local distribution networks
- Junction between exchanges



Features:

- Armoured & Unarmoured construction
- Availability of standard conductor sizes ranging from 0.4 mm to 0.9 mm diameter.
- Available in sizes up to 2400 pairs



Construction

Conductor Conductor - Each conductor consists of a round wire of annealed high conductivity copper.

Insulation Each conductor is insulated with Foam Skin / Solid PE insulation. Foam Skin insulation consists of an extruded inner layer of uncoloured foam, covered by an extruded outer layer of coloured skin with required colours to meet the specification. For Solid insulation each conductor is insulated with Solid medium/high density polyethylene insulation.

Twinning Two insulated conductors are twisted with uniform lay to form a pair. The length of the lay of the pairs is so choses that the cross talk is minimum.

Units & Super Units - 10 or 20 No's of twisted pairs are laid up to form a group which constitutes a unit. In case of cables having more than 100 pairs, 5 units of 10 pairs or 20 pairs are laid up to constitute 50 or 100 pairs or super units respectively.

Stranding For cable upto 20 pairs the required number of twisted pairs are stranded to form a cable core. For cables having 50 and 100 pairs, 5 numbers of 10 pair or 20 pair units are stranded to form 50 and 100 pair cables respectively. For cables having higher than 100 pairs, required number of super units are stranded to form a cable core.

Filling The cable core is fully filled with water resistant compound which is compatible with the polythene insulation of the conductors.

Core Wrapping and Screening - The filled cable core is wrapped with at least one helical or longitudinal plastic tape. Thereafter one aluminium tape, coated with polythene on both sides is applied longitudinally over the cable core with a specified overlap.

Sheathing The screened cable core is sheathed with black polythene compound grade 03C as per BS:6234.

Armouring If the cable is required to be armoured, two helical lapping of polythene bedding tape is applied over the polythene sheath. The cable is then armoured with two applications of galvanized steel tape each applied helically with a specified gap. The second tape covers the gap left by the first tape.

Jacketing The armoured cable is finally jacketed with black polythene compound grade 03C of BS:6234.

TECHNICAL DETAILS

Conductor Diameter	Conductor Resistance at 20°C (Solid or Foam Skin Cable)	Attenuation at 150KHz.
0.40 mm	135 ± 8 Ωhms/Km	12.00 dB/Km (max.avg.)
0.50 mm	86 ± 6 Ωhms/Km	8.25 dB/Km (max. avg.)
0.63 mm	58 ± 4 Ωhms/Km	6.30 dB/Km (max. avg.)
0.90 mm	28 ± 2 Ωhms/Km	4.40 dB/Km (max. avg.)

Mutual Capacitance	Capacitance Unbalance	
52 +/- 3 nF/Km (avg.)	Pair to Pair	Pair to Earth
52 +/- 4.5 nF/Km	50 pF/Km (Max. Avg.)	750 pF/Km (max. avg.)
(individual)	200 pF/Km (Max.)	3000 pF/Km (max.)

Insulation Resistance : 5000 mega ohms / Km (Min.)	
ELFEXT :55 dB/Km (min) at 150 Khz	NEXT : 55 dB (min.) at 150 Khz.
67.8 dB/Km (RMS) at 150 KHz.	