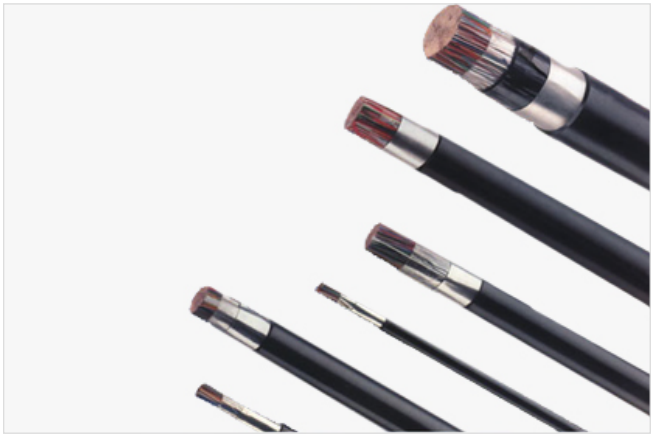
POLYETHYLENE INSULATED JELLY FILLED UNDERGROUND TELEPHONE CABLE



Polyethylene insulated jelly filled Telephone Cables are widely used for primary and Secondary distribution networks. The cables having single jacket are use as duct cables up to 2400 pairs as primary network. Secondary cables are directly buried and may Armoured with additional jacket of a tough weather resistance LDPE Compound.

The cables core are fully filled with gel type hydrocarbon base filling compound having the same dielectric constant and compatible with the insulation and jacketing materials. The cables are manufactured with high-grade materials according to REA & Pakistan Telecommunication Company Limited Specification or customer's requirement

CABLE CONSTRUCTION

CONDUCTOR:

- Fully annealed high quality solid copper, the conductor sizes are 0.4, 0.5, 0.6 & 0.9 mm.

INSULATION:

- Colour high molecular Weight High-Density Polyethylene (HDPE)

COLOUR CODING:

- Colour are fully colour coded in accordance with PIC even count colour code.

PAIRING:

- Two coloured insulated conductors are uniformly twisted together to form a pair, Varying lay length is designed to minimize the cross talk and capacitance unbalance.

FILLING COMPOUND:

- The water resistant filling compound is applied to fill the air spaces within the cable core.

CORE COVERING:

- A non-hygroscopic and dielectrical heat resistant Polyester Tape and Water Blocking Tape are applied helically having a suitable overlap

FLOODING COMPOUND:

- Gel type hydrocarbon base compound is applied between the core wrap and shield

MOISTURE BARRIER INNER PE SHEATH (INNER JACKET)

- An Almunium Tape with Copolymer coating is applied over the cable core & sheath with Black Polyethylene Compound.

ARMOUR (OPTIONAL):

- A Tin Coated Corrugated Steel Tape is applied longitudinally directly over the Inner Sheath with suitable flooding compound.

JACKET:

- Black High Molecular Weight Low Density Polyethylene (LDPE)

IDENTIFICATION:

- An Identification Tape durable marked with the Manufacturer's Name, year of Manufacturing,Contract Number, Cable size & Type, if required, is placed under the Core Covering Tape. Alternatively, these details may be printed on the outer jacket of cable with length marking.

PTCL CABLES
Pakistan Telephone Cables Limited

COPPER TELECOM CABLE

UNIT IDENTIFICATION / COLOUR SCHEME FOR 25 PAIR UNIT

Pair No.	Color	
	Ring	Tip
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

UNIT IDENTIFICATION / COLOUR SCHEME FOR 25 PAIR UNIT

Pair No.	Unit Pairs Count	Colors of Unit Identification Tape
01	1-25	
02	26-50	
03	51-75	
04	76-100	
05	101-125	
06	126-150	
07	151-175	
08	176-200	
09	201-225	
10	226-250	
11	251-275	
12	276-300	
13	301-325	
14	326-350	
15	351-375	
16	376-400	
17	401-425	
18	426-450	
19	451-475	
20	476-500	
21	501-525	
22	526-550	
23	551-575	
24	576-600	

PTCL CABLES
Pakistan Telephone Cables Limited

COPPER TELECOM CABLE

UN-ARMOURED CABLES

Conductor Diameter	0.4mm			0.5mm			0.6mm		
Number of Pairs	Outer Diameter MM	Normal Weight Kg / Km (Approx)	Standard Length Meters	Outer Diameter MM	Normal Weight Kg / Km (Approx)	Standard Length Meters	Outer Diameter MM	Normal Weight Kg / Km (Approx)	Standard Length Meters
10	10.20	110.90	1000	11.40	172.50	1000	12.70	175.50	1000
20	12.20	116.47	1000	13.90	223.40	1000	15.70	291.50	1000
30	13.70	218.30	1000	15.90	301.00	1000	17.90	393.00	1000
50	16.20	316.70	1000	18.90	443.70	1000	21.70	600.00	1000
100	20.40	568.16	1000	25.00	801.00	1000	29.10	1090.00	1000
200	28.60	996.00	1000	34.00	1500.00	1000	39.20	2100.00	1000
300	32.40	1418.60	1000	40.40	2161.10	1000	47.10	3014.70	500
600	44.40	2722.00	500	55.80	4170.00	500	65.90	5871.00	500
900	53.10	3985.50	500	67.20	6200.00	500	81.00	933.00	250
1200	60.60	5253.60	250	-	-	-	-	-	-

ARMOURED CABLES

Conductor Diameter	0.4 mm			0.5 mm			0.6mm		
Number of Pairs	Outer Diameter MM	Normal Weight Kg / Km (Approx)	Standard Length Meters	Outer Diameter MM	Normal Weight Kg / Km (Approx)	Standard Length Meters	Outer Diameter MM	Normal Weight Kg / Km (Approx)	Standard Length Meters
10	16.20	280.17	1000	17.40	325.97	1000	18.70	367.77	1000
20	18.20	361.47	1000	19.90	436.36	1000	21.70	530.00	1000
30	19.70	430.30	1000	21.90	541.00	1000	24.30	671.68	1000
50	22.20	558.70	1000	25.30	736.19	1000	28.10	927.62	1000
100	26.80	847.16	1000	31.40	1168.51	1000	35.90	1526.75	500
200	34.40	1418.16	1000	40.80	1975.12	500	46.40	2663.31	500
300	39.10	1915.50	500	47.60	2782.19	500	54.70	3764.00	500
600	51.60	3400.00	500	63.40	5042.00	500	73.90	6931.61	300

ELECTRIC CHARACTERISTICS

Conductor Resistance at 20 °C (Ω / Km)		145	92	63
Mutual Capacitance at 1000 Hz (nF / Km)	Maximum Individual	52 ± 4 nF	52 ± 4 nF	52 ± 4 nF
Average	Maximum	52 ± 3 nF	52 ± 3 nF	52 ± 3 nF
Capacitance Unbalance (pF / 300 M) - Pair to Pair				
	Maximum Average / 300 M	25 pF	25 pF	25 pF
	Maximum Individual / 300 M	100 pF	100 pF	100 pF
- Pair to Ground	Maximum Average / 300 M	175 pF	175 pF	175 pF
Individual / 300 M	Maximum	800 pF	800 pF	800 pF
Insulation Resistance at 500 v DC (MΩ / km)	Minimum	5000 MΩ	5000 MΩ	5000 MΩ
High Voltage Test DC KV - Conductor to Conductor		2.5 KV	2.5 KV	2.5 KV
- Conductor to Shield		10 KV	10 KV	10 KV
Cross Talk Coupling Loss at 150 KHz	Minimum	73 dB	73 dB	73 dB
Attenuation (dB / km) 1 KHz)		1.88	1.50	1.25
150 KHz		11.20	8.40	6.80
772 KHz		21.00	16.50	13.90
1024 KHz		23.40	19.40	16.10
1500 KHz		29.40	23.60	19.50