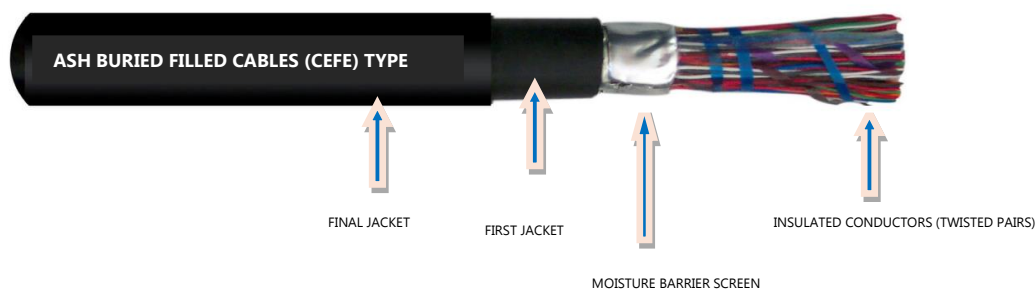


ASH TELEPHONE DIRECT BURIED TYPE (CEFE) JELLY FILLED CABLES

APPLICATION	
-Filled Cables used in Telecommunication Network. It is intended for use in Secondary Network between Cross Connection Cabinet and Distribution Points and Primary Network between the Exchange and Cross-Connection Cabinets. Filled Cables having Double Sheath (Inner & Outer) are used for Direct Burial Cable.	
STANDARDS	
TS-2002 (MAT-1101)	Saudi Telecom Specification
IEC 60708	Low-frequency cables with polyolefin insulation and moisture barrier polyolefin sheath
CONSTRUCTION DETAILS	
CONDUCTOR	Plain annealed high quality solid copper conductor to ASTM B3 Nominal Conductor dia. (mm): 0.40, 0.50, 0.65 & 0.90
INSULATION	Each conductor shall be covered with continuous layer of Cellular Foam-Skin High Density Polyethylene conforming to ASTM D 1248, Type III, Category 4 or 5, Grade E8 or E9. Color of insulated conductors shall be identified in Table-1 & Table-2.
PAIR FORMATION	Two insulated conductors are uniformly twisted to form a pair with a suitable lay.
ASSEMBLY / LAYING-UP	-10 pairs are assembled to form a sub-unit; each sub-unit shall be bound with a colored binding tape for sub-unit identification. -5 sub-units shall be assembled to form a 50-pair unit and 10 sub-units shall be assembled to form a 100-pair unit. -Cables of 100 pairs or less, a 10-pair sub-unit shall be assembled together. Cables of more than 100 pairs, a 50-pair unit or a 100-pair unit shall be assembled together.
JELLY FILLING	The interstices are filled with a Petro jelly compound compatible with the insulation and other cable materials.
WRAPPING	The assembled core shall be covered by one or more non-hygroscopic and non-wicking dielectric polyester tape(s) applied longitudinally and/or helically with an overlap of not less than 5 mm.
MOISTURE BARRIER	Aluminum Tape, coated on both sides with co-polymer conforming to ASTM B736, Type 1, Class 1. Applied longitudinally with a suitable overlap to prevent the ingress of water to the cable.
First Sheath:	Extruded black Linear Low Density Polyethylene conforming to ASTM D 1248, Type I, Class C, Category 4 or 5, Grade J3. Continuously bonded to the aluminum tape to prevent of water penetration to the core and the transport of water between the sheath and the tape.
OUTER JACKET	The inner sheath shall be applied with Viscous Flooding compound and shall be covered with Black High Density Polyethylene by extrusion process, conforming to ASTM D 1248 Type III, Class C, Category 4 or 5, Grade J4.
Cable Marking	ASH TELEPHONE CABLE BURIED CEFE No. of pairs X (size) MM ASHCABLES KSA (Year of manufacture) (Meter Marking)

Figure 1



ASH TELEPHONE DIRECT BURIED TYPE (CEFE) JELLY FILLED CABLES

DIMENSIONS AND WEIGHTS

S/N	ASH CABLES ITEM CODE	No. of Pairs	Conductor dia. (mm)	Approx. Overall Dia. (mm)	Approx. Net Weight (Kg/Km)	Standard Drum (m)±5%
1	DE1O-02P065MM-UBK6P	2	0.65	10.35	100	1000
2	DE1O-04P065MM-UBK6P	4	0.65	12.10	135	1000
3	DO1O-05P065MM-UBK6P	5	0.65	13.60	165	1000
4	DO1O-06P065MM-UBK6P	6	0.65	14.00	175	1000
5	DO1O-08P065MM-UBK6P	8	0.65	14.90	210	1000
6	DO1O-10P065MM-UBK6P	10	0.65	16.00	245	1000
7	DO1O-12P065MM-UBK6P	12	0.65	16.80	275	1000
8	DO1O-15P065MM-UBK6P	15	0.65	18.10	310	1000
9	DO1O-20P065MM-UBK6P	20	0.65	19.70	395	1000
10	DO1O-25P065MM-UBK6P	25	0.65	18.10	365	1000
11	DO1O-30P065MM-UBK6P	30	0.65	22.30	515	1000
12	DO1O-40P065MM-UBK6P	40	0.65	24.50	635	1000
13	DO1O-50P065MM-UBK6P	50	0.65	26.80	770	500
14	DO1O-70P065MM-UBK6P	70	0.65	30.20	990	500
15	DO1O-100P65MM-UBK6P	100	0.65	34.80	1345	500

COLOUR CODE OF INSULATED WIRES

TABLE 1
10 Pair Count

PAIR NO.	WIRE (A)	WIRE (B)
01	White	Blue
02	White	Orange
03	White	Green
04	White	Brown
05	White	Grey
06	Red	Blue
07	Red	Orange
08	Red	Green
09	Red	Brown
10	Red	Grey

TABLE 2
25 Pair Count

PAIR NO.	WIRE (A)	WIRE (B)
01	White	Blue
02	White	Orange
03	White	Green
04	White	Brown
05	White	Grey
06	Red	Blue
07	Red	Orange
08	Red	Green
09	Red	Brown
10	Red	Grey
11	Black	Blue
12	Black	Orange
13	Black	Green
14	Black	Brown
15	Black	Grey
16	Yellow	Blue
17	Yellow	Orange
18	Yellow	Green
19	Yellow	Brown
20	Yellow	Grey
21	Violet	Blue
22	Violet	Orange
23	Violet	Green
24	Violet	Brown
25	Violet	Grey

ASH TELEPHONE DIRECT BURIED TYPE (CEFE) JELLY FILLED CABLES

ELECTRICAL AND TRANSMISSION CHARACTERISTICS (STC – 2002)

S/N	PARAMETERS	UNITS	0.40 mm	0.50 mm	0.65 mm	0.90 mm
1	Conductor Resistance (max.)	Ω /Km	150	96	57	30
2	Resistance Unbalance (max.)	%	2.50	2.50	2.0	2.0
3	Insulation Resistance (min.)	M. Ω .Km	2500	2500	2500	2500
4	Dielectric Strength					
4.1	Conductor to Conductor	DC Volt	2400	2400	3000	3600
4.2	Conductor to Shield	DC Volt	5000	5000	10000	10000
5	Mutual Capacitance (max.)	nF/Km	50.0	50.0	50.0	50.0
6	CUPP (max.)	pF/500 M	150	150	150	150
7	CUPG (max.)	pF/Km	2500	2500	2500	2500
8	Attenuation @1 KHz (max.)	dB/Km	1.81	1.45	1.10	0.80
9	Attenuation @1 Mhz (max.)	dB/Km	25.7	21.0	16.30	13.60
10	PS NEXT @ 1KHz (min.)	dB/Km	70	70	70	70
11	PS NEXT @ 12KHz (min.)	dB/Km	67	67	67	67
12	PS NEXT @ 80KHz (min.)	dB/Km	55	55	55	55
13	PS NEXT @ 1000KHz (min.)	dB/Km	37	37	37	37
14	PS ELFEXT @ 1KHz (min.)	dB/Km	74	74	74	74
15	PS ELFEXT @ 12KHz (min.)	dB/Km	71	71	71	71
16	PS ELFEXT @ 80KHz (min.)	dB/Km	58	58	58	58
17	PS ELFEXT @ 1000KHz (min.)	dB/Km	36	36	36	36

ELECTRICAL AND TRANSMISSION CHARACTERISTICS (IEC 60708)

S/N	PARAMETERS	UNITS	0.40 mm	0.50 mm	0.60 mm
1	Conductor Resistance (max.)	Ω /Km	150	96	66.60
2	Resistance Unbalance (max.)	%	2.0	2.0	2.0
3	Insulation Resistance (min.)	M. Ω .Km	1500	1500	1500
4	Dielectric Strength				
4.1	Conductor to Conductor	DC Volt	1000	1000	1000
4.2	Conductor to Shield	DC Volt	2000	2000	2000
5	Mutual Capacitance (max.)	nF/Km	64	64	64
6	CUPP (max.)	pF/500 M	150	150	150
7	CUPG (max.)	pF/Km	2500	2500	2500
8	PS NEXT @ 150KHz (min.)	dB/Km	49	49	49
9	PS NEXT @ 300KHz (min.)	dB/Km	45	45	45
10	PS NEXT @ 1000KHz (min.)	dB/Km	37	37	37
11	PS ELFEXT @ 150KHz (min.)	dB/Km	54	54	54
12	PS ELFEXT @ 300KHz (min.)	dB/Km	48	48	48
13	PS ELFEXT @ 1000KHz (min.)	dB/Km	38	38	38