



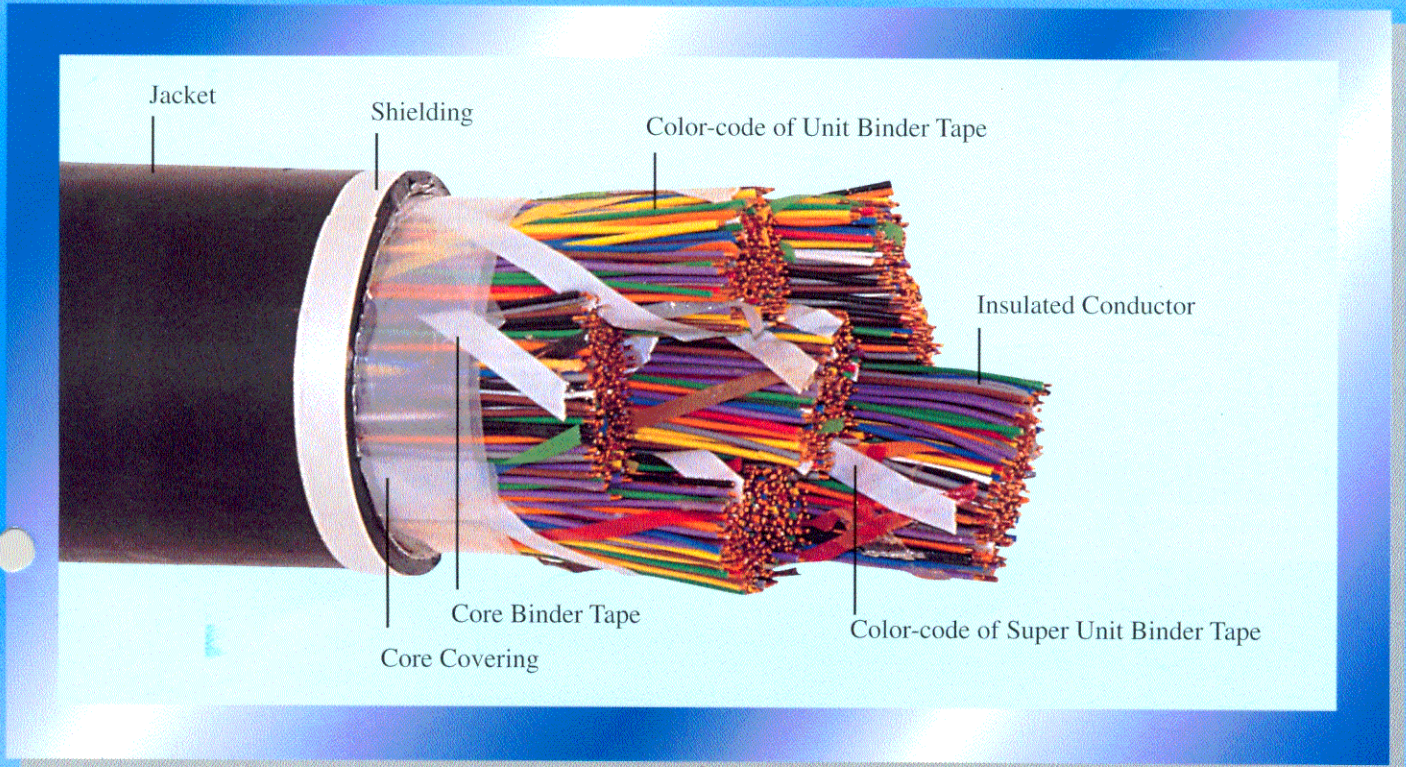
BANGKOK TELECOM

BTS - M - 004

Type: AP



ALPETH SHEATHED CABLE



GENERAL

This specification covers the requirements for polyethylene insulation alpeth sheathed cable, intended for aerial installation by attachment to a separate support strand. The cable shall be used on subscriber and junction line.

CONSTRUCTION

CONDUCTOR: Annealed copper conductor.

0.40, 0.50, 0.65 and 0.90 mm (26, 24, 22, 19 AWG) in size.

INSULATION : Polyethylene insulation.

TWISTED PAIRS : The insulated conductors are twisted into pairs with specified color combinations to provide pairs identification.

CABLE ASSEMBLY : Cables having 25 pairs and less are assembled in a single group. Cables having more than 25 pairs are assembled in units each being identifiable by color coded unit binders.

IDENTIFICATION TAPE : A tape, indelibly marked with the following details, shall be laid over the cable core or under the outer lapping tape (nonhygroscopic dielectric material)

OPTION AND OTHER CONSTRUCTIONS

Cable of other conductor size or having other mutual capacitance than shown in this catalogue are available on request.

No. of Pairs nominal	Conductor Diameter : 0.40 mm (26 AWG)			No. of Pairs nominal	Conductor Diameter : 0.50 mm (24 AWG)		
	Overall Dia. approx. (mm)	Cable Wt. approx. (kg/km)	Standard Length (m)		Overall Dia. approx. (mm)	Cable Wt. approx. (kg/km)	Standard Length (m)
10	10	86	1,000	4	9	74	1,000
12	10	95	1,000	5	10	81	1,000
13	10	99	1,000	6	10	88	1,000
15	11	108	1,000	8	11	101	1,000
16	11	112	1,000	10	11	112	1,000
20	11	128	1,000	11	11	117	1,000
25	12	148	1,000	12	11	125	1,000
30	13	169	1,000	13	12	130	1,000
40	14	206	1,000	15	12	144	1,000
50	15	242	1,000	16	12	149	1,000
75	17	330	1,000	20	13	173	1,000
100	19	415	1,000	25	14	203	1,000
150	22	584	1,000	30	15	233	1,000
200	24	747	1,000	40	16	291	1,000
300	30	1,105	1,000	50	17	344	1,000
400	33	1,424	1,000	75	20	479	1,000
600	40	2,065	500	100	22	612	1,000
700	43	2,375	500	150	27	877	1,000
800	46	2,723	500	200	31	1,155	1,000
900	48	3,343	500	250	33	1,406	1,000
1,200	54	3,956	250	300	36	1,679	500
1,500	60	4,903	250	400	41	2,174	500
1,800	65	5,871	250	500	45	2,665	500
				600	49	3,190	500
				700	52	3,676	250
				800	56	4,193	250
				900	59	4,675	250
				1,000	61	5,158	250
				1,200	67	6,175	250
				1,500	74	7,613	200
				1,800	80	9,044	200

All cable dimensions and weights are subject to manufacturing tolerances. Spare pairs may be included at the manufacturer's discretion.

No. of Pairs nominal	Conductor Diameter : 0.65 mm (22 AWG)			No. of Pairs nominal	Conductor Diameter : 0.90 mm (19 AWG)		
	Overall Dia. approx. (mm)	Cable Wt. approx. (kg/km)	Standard Length (m)		Overall Dia. approx. (mm)	Cable Wt. approx. (kg/km)	Standard Length (m)
3	10	79	1,000	2	11	93	1,000
4	10	90	1,000	3	12	114	1,000
5	11	102	1,000	4	12	136	1,000
6	11	110	1,000	5	13	156	1,000
8	12	129	1,000	6	14	174	1,000
10	12	147	1,000	8	15	207	1,000
12	13	165	1,000	10	15	241	1,000
13	13	173	1,000	12	16	274	1,000
15	14	192	1,000	13	16	292	1,000
16	14	202	1,000	15	17	326	1,000
20	15	236	1,000	16	18	344	1,000
25	16	281	1,000	20	19	411	1,000
30	17	324	1,000	25	21	497	1,000
40	19	408	1,000	30	22	584	1,000
50	20	490	1,000	35	24	664	1,000
75	23	698	1,000	40	25	746	1,000
100	27	904	1,000	50	29	937	1,000
150	32	1,314	1,000	75	34	1,330	1,000
200	36	1,720	500	100	38	1,739	500
300	43	2,486	500	150	46	2,542	500
400	49	3,287	500	200	51	3,305	250
500	54	4,040	250	300	61	4,848	250
600	59	4,820	250	400	70	6,403	250
700	63	5,568	250				
800	67	6,369	250				
900	70	7,114	250				

All cable dimensions and weights are subject to manufacturing tolerances. Spare pairs may be included at the manufacturer's discretion.

a. Manufacturers Name

b. Year of Manufacture (Duration of two years)

Or the marking shall be printed on the outer lapping tape. The marking shall appear at intervals not more than 50 cm throughout the cable length.

CORE COVERING: Nonhygroscopic dielectric tape.

SHIELDING : A corrugated polyethylene coated 0.2 mm aluminum tape is applied longitudinally with overlap

OUTER JACKET : High molecular weight, low or medium density polyethylene colored black..

LENGTH MARKER : Each length of cable shall be permanently identified as, manufacturer name, year of manufacturer, type and size of cable, and sequentially numbered length. The marking shall be printed on the outer jacket. An alternate method of marking may be used if acceptable to the **CLIENT**.

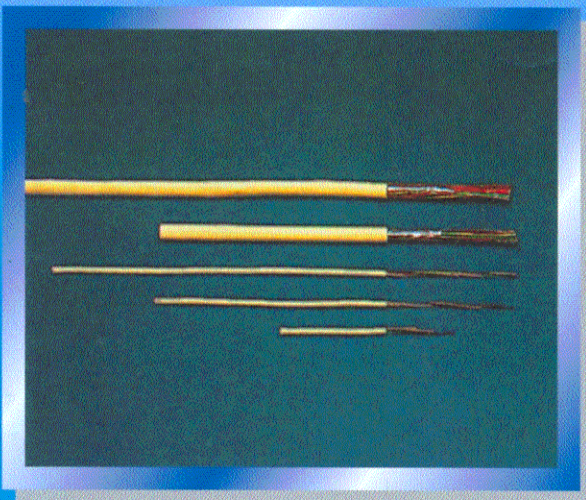
ELECTRICAL CHARACTERISTICS

Conductor Diameter mm (AWG)			0.40 (26)	0.50 (24)	0.65 (22)	0.90 (19)
Mutual Capacitance, Average, nF./km		≤ 25 Pairs	52 ± 4			
		> 25 Pairs	52 ± 2			
Mutual Capacitance Deviation, %		rms. Maximum	3			
Capacitance Unbalance PF/km	Pair to pair	6 pairs or less	Individual Maximum			
		More than 6 pairs	rms. Maximum			
	Pair to Ground	All cables	Individual Maximum			
		6 pairs and larger	Maximum Average			
Far End Crosstalk Loss at 150 kHz, dB/km		rms. Minimum	67.8			
		Individual Minimum	57.8			
Near End Crosstalk Loss M-S at 772 kHz, dB		Within Unit	13 pairs of less		56	
			18 and 25 pairs		60	
		Between Units	Adjacent 13 pairs or less		65	
			Adjacent 25 pairs		66	
		Non-adjacent	81			
Attenuation Nominal dB/km at 20°C		at 150 kHz	11.35	8.31	6.20	4.40
		at 772 kHz	22.83	18.52	14.63	10.40
Insulation Resistance, Megohm-km		Minimum	16,000			
High Voltage Test dc for 3 sec., volts		Conductor to Conductor	2,400	3,000	3,600	4,500
		Conductor to Shield	10,000			
DC Conductor Resistance, ohms/km, at 20°C		Maximum	144.4	90.2	57.1	28.5
Resistance Unbalance %		Maximum Average	2.0	1.5	1.5	1.5
		Individual Maximum	5.0	5.0	4.0	4.0
Parameter Variations are Allowed as Follows:						
Maximum Number of Pairs with Electrical Variation						
		Nominal Pair Count	Maximum Number of Pairs with Electrical Variation			
		up to - 100	1			
		101 - 300	2			
		301 - 400	3			
		401 - 600	4			
		601 and above	6			
Variation Values						
Capacitance Unbalance Pair to Ground, PF/km		Individual Maximum	3,280			
DC Conductor Resistance at 20°C, ohms/km		Maximum	151.6	94.5	60.0	29.9
Resistance Unbalance, %		Individual Maximum	7.0			
Far End Crosstalk Loss at 150 kHz, dB/km		Individual	51.8			



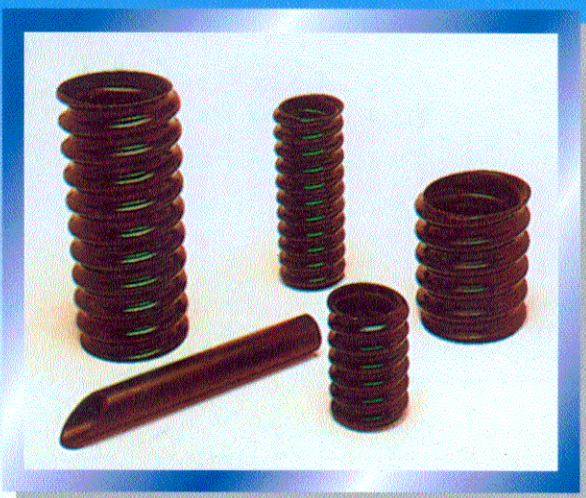
TELEPHONE CABLE OUTSIDE BUILDING

AP	AP-FSF
AP(8)	ASP-FSF
PAP	AP-FSF-SWA
AP-LOW-LOSS	DSAP-FSF
DSAP-PIC	DSAP-FSF-SWA
OTHERS	



INSIDE BUILDING

TPVV, TPUVV
TPEV-CC
TIEV-CC
TIEV-P
TJV
OTHERS



TELEPHONE & ELECTRICAL CONDUIT

PE SUB-DUCT
EFLEX PIPE AND ACCESSORY



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