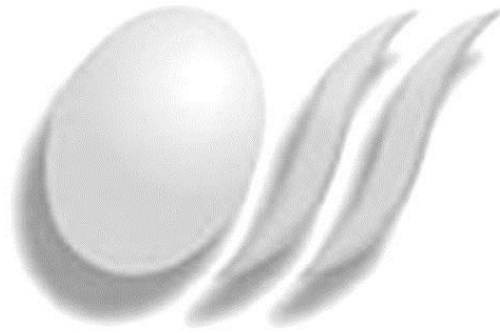


SHAHID GHANDI COMMUNICATION CABLE CO.

CODE: 0302-019

**TECHNICAL SPECIFICATION FOR
DATA CABLE
(CAT6-FTP-LDPE)**



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JANUARY 2016**

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**SPECIFICATION FOR
DATA CABLE
(CAT6-FTP-LDPE)**

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1 - GENERAL

This specification details the construction of **Category 6** network cable. The conductors are solid copper, covered with a solid plastic insulating compound. The insulated conductors (four twisted pairs) are inside cable core. The cable structure is completed with aluminum foil and LDPE jacket . The cable is fully color coded so that each insulated conductor in the cable is distinguishable from other insulated conductor. Cat-6 cable supports frequencies up to 250 MHz .

2 - ASSOCIATED DOCUMENTS

This specification is in accordance with REA'ASTM (American society for testing and material), BS (British Standard Institute), IP (Institute of Petroleum), ISO (International Organization for Standardization) and TIA/EIA 568B has been specified.

3 - TEMPERATURE AND ENVIRONMENT

The cables shall without detriment, perform suitably throughout a temperature range of -40 to +70 C.

4 - CONDUCTOR

Each conductor is a solid wire of commercially pure annealed copper, smoothly drawn, circular in cross section, uniform in quality and free from defects. Conductors meet the quality requirements of ASTM B3. The maximum resistance for a cross section area of 1 mm² and a length of 1 km is 17.241 ohms when measured at 20±2 °C.

The nominal conductor diameters may be 0.57 mm (23 AWG).

5 - CONDUCTOR INSULATION

Each conductor is uniformly covered with solid polyethylene conforming to ASTM D-1248. Type III class A category 4 or 5 Grade E8. Insulation contains a suitable antioxidant system including a copper inhibitor. The insulation will be uniform, smooth and have non-porous surface.

The insulation colors are in accordance with the following table (1).

Table 1

Number Pairs	Color Coded
1	White – Blue / Blue
2	White – Orange / Orange
3	White – Green / Green
4	White – Brown / Brown

6 – TWISTING

Two appropriately colored insulated conductors are uniformly twisted together to form a pair. The lays of all pairs are in the same direction and different for each pair in a unit.

7 - STRANDING

The pairs colored according to the table (1) with cross web (separator) are stranded to form a cylindrical core. Stranding may be accomplished by using a concentric stranding where the pairs will change positions according to the change in direction of lay.

A tinned copper wire as earth continuity will be applied under aluminum foil with diameter of 0.4 mm.

8 - ALUMINUM SHIELD

An aluminum foil with copolymer coating on one side will be applied longitudinally with 3 mm overlap at least. The Aluminum thickness is 35 micron.

9 - RIP CORD

The rip cords will be placed under the jacket and must be strong and flexible enough to be able to strip or the jackets easily.

10 – OUTER JACKET

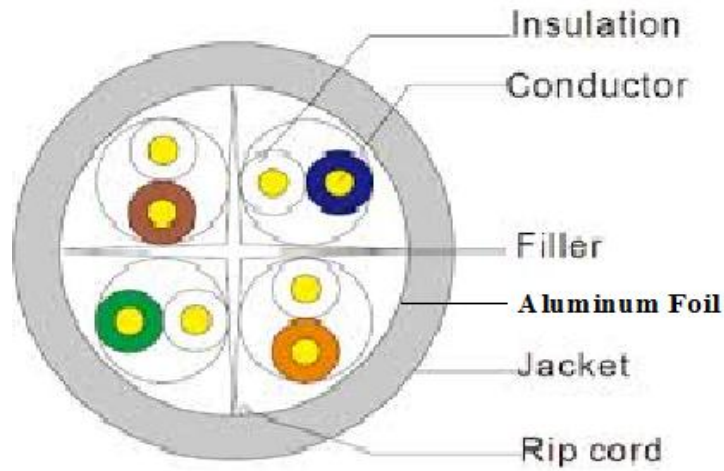
A UV resistant black polyethylene jacket in accordance with ASTM D-1248 type I will be applied over the aluminum foil. The nominal jacket thickness will be 0.8 mm.

11- IDENTIFICATION MARKING

Each length of the cable shall be permanently identified as to the manufacturer, year of manufacture and cable type. The marking will be printed on the outer jacket.

NOTE: Other method as request

12 - CABLE FORMATION



13 – ELECTRICAL PARAMETERS

Freq.	Attenuation Max	Return Loss Min	NEXT Min	PS. NEXT Min	PS. ACR Min	PS. ELFEXT Min	ELFEXT Min
MHz	dB/100m	dB	dB	dB	dB	dB/100m	dB/100m
1	2.0	20.0	76.3	74.3	72.3	64.8	67.8
4	3.8	23.0	67.3	65.3	61.5	52.7	55.7
8	5.3	24.5	62.8	60.8	55.5	46.7	49.7
10	6.0	25.0	61.3	59.3	53.3	44.8	47.8
16	7.6	25.0	58.3	56.3	48.7	40.7	43.7
20	8.5	25.0	56.8	54.8	46.3	38.7	41.7
25	9.5	24.3	55.3	53.3	43.8	36.8	39.8
31.25	10.7	23.6	53.9	51.9	41.2	34.9	37.9
62.5	15.4	21.5	49.4	47.4	32.0	28.8	31.8
100	19.8	20.1	46.3	44.3	24.5	24.8	27.8
155	25.1	18.8	43.5	41.5	16.4	20.9	23.9
200	29.0	18.0	41.8	39.8	10.8	18.7	21.7
250	32.8	17.3	40.3	38.3	5.5	16.8	19.8

* All data in table are ideal and the real test results may deviate from the above table.