Telephone Cables

To cater the growing need of telecommunication, HPL presents HPL Telephone Cables as a fulfillment of our commitment to quality and performance HPL Telephone cables are among the best in industry and meet various national and international standard requirements.

Construction

Conductor - Bare/tinned annealed copper

Insulation - PVC/ PE

Shielding - Individual /Overall Shielded with aluminium tape (Polyster backed) or Bare/Tinned copper wire braiding

Outersheath - PVC

Sizes - 0.45/0.5/0.6/0.7/0.8/0.9 mm dia conductors available in 1 pair to 50 pair

Standard - TEC Specification G/WIR 06/02

Applications

For telecom data transmission in telephones, Intercoms, EPBAX, FAX, Close circuit security system, Residential / Industrial telephone line.

Salient Features

- Specially formulated hard grade PVC, is used for insulation. This PVC not only gives long life and better stability to cable but also has high electric properties to minimize losses and disturbances.
- Distinct Color Coding System as per TEC.
- Pairs having staggered lay especially the adjacent one to minimize the cross talk.
- Precise and controlled sizing and process is done for conductor and insulated cores with all automatically controlled machines to attain the perfect and optimum value of capacitance, attenuation and impedance.
- Shielding is provided as optional feature, to avoid external as well as inter pair interferences, when the cables are used for specific needs.

No. of Pair	0.45 mm Diaover Insulation (mm)	Conductor App Overall Dia (mm)	0.50 mm Diaover Insulation (mm)	Conductor App Overall Dia (mm)	0.60 mm Diaover Insulation (mm)	Conductor App Overall Dia (mm)	0.70 mm Diaover Insulation (mm)	Conductor App Overall Dia (mm)
1	0.80	2.60	0.90	2.80	1.00	3.00	1.20	3.70
2	0.80	4.00	0.90	4.40	1.00	4.70	1.20	5.60
3	0.80	4.20	0.90	4.60	1.00	5.00	1.20	5.90
4	0.80	4.60	0.90	5.00	1.00	5.40	1.20	6.40
5	0.80	5.00	0.90	5.40	1.00	5.90	1.20	7.00
6	0.80	5.40	0.90	5.90	1.00	6.40	1.20	7.60
8	0.80	5.70	0.90	6.30	1.00	6.80	1.20	8.10
10	0.80	6.70	0.90	7.40	1.00	8.00	1.20	9.30
20	0.80	8.60	0.90	9.50	1.00	10.30	1.20	12.00
40	0.80	11.80	0.90	13.00	1.00	14.10	1.20	17.00
50	0.80	13.20	0.90	14.60	1.00	16.00	1.20	18.70

HSPL/Wire/10-12

HPL INDIA LTD.
HPL Electric & Power Pvt. Ltd.
1/21, Asaf Ali Road, New Delhi - 110 002 Ph.: 011-23234411, 23234811
Fax : 011-23232639 E-mail: gsm@hplindia.com

www.hplindia.com

Due to continuous development, specifications and features are subject to change without prior notice.

HPL

Wires & Cables

We Assure You of :

- ☑ Electrolytic 100% Pure Copper
- ☑ High Insulation Resistance
- ☑ Double Insulation with Ultra thin Layer

THE SEAL OF QUALITY HPL WIRES AND CABLES

IS : 694/1990

CM/L No. 9696314

HPL Presents complete range of Domestic and Industrial Flexible Wire & Cables for various applications

www.hplindia.com

HPL Group, celebrating its Golden Jubilee, 1956 : 2006, has been pursuing vision of creating a niche, as major player in Indian Electrical Industry with commitment to state-of-the-art technological world class products.

HPL Group posses seven most modern manufacturing units, ISO 9001 : 2000 certified, located at Gurgaon, Noida, Sonipat and Himachal Pradesh having 5,00,000 sq. feet covered area to manufacture products confirming to International and Indian standards.

HPL has under its umbrella on going, healthy and growing Joint Ventures with

HPL Products have been tested at CPRI, ERDA, ERTL, NPL etc. according to Indian Standards, whereas MCB's, Rewireable Switches & Electronic Energy Meters carry ISI marking. Further HPL products have approvals from CPWD Sate PWD's, MES, BSNL & many more Institutional users.

IS : 694/1990

CM/L No. 9696314

NABCB QM 017

PRODUCT PORTFOLIO

- FR Cables & Wires
- FRLS PVC Cables & Wires
- HR PVC Cables & Wires
- ZHLS Wires
- Co-axial Cable
- Telephone Cable
- CAT-5 Cable
- Submersible Cable
- Instrumentation Cable
- Special purpose Wires/Cables as per customer requirement

Domestic Wires And Cables

Owing to our consistent efforts for quality and providing the best, we have developed exhaustive range of domestic wires and cables suitable to Indian homes and varied conditions. Manufactured with best quality of Conductor (electrolytic grade copper, 100% pure) and finest grade of indigenously developed PVC compound, HPL Wires and Cables give maximum safety at no extra cost

Construction

Conductor - Bare annealed copper
Insulation - Double layer FR grade PVC insulation with inner layer of natural PVC and very thin outer layer of colour PVC.
Standard - IS:694/1990
Sizes - 0.5 sq.mm to 400 sq.mm

Applications

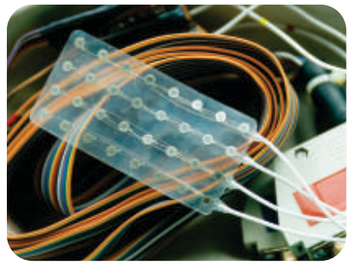
HPL Single core wires can be used in duct, conduit, or Aerial wiring for electric power in:

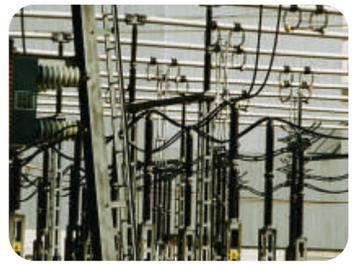
Houses | Buildings | Flats | Apartments | Hospitals | Factories

also used with UPS, invertor, battery, control panels etc

Salient Features

- Electrolytic Grade copper having 100% purity and maximum conductivity to ensure maximum safety.
- Bunching of copper in uniform lay & diameter, that makes stripping & crimping of wires easier & minimizes losses .
- Indigenously developed PVC compound formulated from finest ingredients and produced in-house.
- Double insulation, with primary insulation from virgin PVC, coated with ultra thin colour layer.





Single Core Electric Wire with Flexible Copper Conductor Ref : IS: 694/1990 ISI Marked

HPL 650/1100V Grade Multi Strand Flexible Annealed Bare Copper, Conductor, FR PVC Insulated and Unsheathed Single Core Flexible Cables Conforming to IS : 694/1990 with ISI Mark (Building Wire)

Nominal Cross Sectional Area of the Conductor Sq. mm	Nos./Nominal Dia. of Strand No./(mm)	Nominal Thickness of Insulation (mm)	Approx. Overall Dia (mm)	Conductor Resistance at 20° C Max. Ohm/km	Current Rating (Amps.)	
					2 Wires, In Conduit/ Trunking	1 Phase # Clipped Directly to Surface or on Cable Tray
0.75	**24/.2	0.6	2.5	26.0	7	8
1.0	*14/.3	0.7	2.8	18.1	11	12
1.5	*22/.3	0.7	3.1	12.1	13	16
2.5	*36/.3	0.8	3.8	7.41	18	22
4.0	**56/.3	0.8	4.4	4.95	24	29
6.0	**84/.3	0.8	4.9	3.30	31	37

NOTE : - Std. Colours - Red, Yellow, Blue, Black & Green
Normal packing length - 90 mtrs. in project packing - 180 mtrs.

HPL 650/1100V Grade Multi Strand Flexible Annealed Bare Copper, Conductor, PVC Insulated and Unsheathed Single Core Flexible Cables Conforming to IS : 694/1990 with ISI Mark (Panel Wire)

Conductor Area	No. & Size of Each Strand	Cond. Bunched Die (Approx)	Max. DC Resistance at 20°C	Insulation Thickness Nominal	Cable Dia App.	#Current Carrying Capacity	Conductor Area	No. & Size of Each	Cond. Bunched Die	Max. DC Resistance at 20°C	Insulation Thickness Nominal	Cable Dia App.	#Current Carrying Capacity
Sq. mm.	mm.	mm.	Ohm/Km.	mm.	mm.	Amp.	Sq. mm.	mm.	mm.	Ohm/Km.	mm.	mm.	Amp.
0.50	16/0.20	0.94	39.00	0.60	2.20	4	35.00	276/0.40	8.74	0.554	1.20	11.40	91
0.75	24/0.20	1.13	26.00	0.60	2.50	7	50.00	396/0.40	10.60	0.386	1.40	13.70	120
1.00	32/0.20	1.31	19.50	0.60	2.60	11	70.00	440/0.45	12.56	0.272	1.40	15.60	161
1.50	48/0.20	1.60	13.30	0.60	2.90	14	95.00	590/0.45	14.54	0.206	1.60	18.00	200
2.50	80/0.20	2.08	7.96	0.70	3.60	19	120.00	750/0.45	16.45	0.161	1.60	20.00	225
4.00	56/0.30	2.60	4.95	0.80	4.30	26	150.00	943/0.45	18.45	0.129	1.80	22.30	240
6.00	84/0.30	3.20	3.30	0.80	4.90	37	185.00	1150/0.45	20.40	0.106	2.00	24.60	300
10.00	140/0.30	4.67	1.91	1.00	6.60	42	240.00	1500/0.45	23.30	0.0801	2.20	28.00	425
16.00	126/0.40	5.90	1.21	1.00	8.00	57	300.00	1875/0.45	26.00	0.0641	2.40	31.00	475
25.00	196/0.40	7.36	0.78	1.20	10.00	71	400.00	2500/0.45	30.10	0.0486	2.60	35.70	550

*** Conductor :** Class 2 as per IS : 8130 : 1984
**** Conductor :** Class 5 as per IS : 8130-1984

Standard Packing - 100 mtrs Coils
Colours available - Red, Yellow, Blue, Black, Grey & Green.

HPL 650/1100V Grade Multi Strand Flexible Annealed Copper Conductor, PVC Insulated Unsheathed, Sheathed Multi-Core Flexible Cables Conforming to IS : 694/1990 with ISI Mark

Conductor Area	No. & Size of Each Strand	Cond. Bunched Die (Approx)	Max. DC Resistance at 20°C	Insulation Thickness Nominal	Core Dia.	Sheath Thickness Nominal				Overall Diameter Approx.				#Current Rating
						2 Core	3 Core	4 Core	5 Core	2 Core	3 Core	4 Core	5 Core	
Sq. mm.	mm.	mm.	Ohm/km	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	Amp.
0.50	16/0.2	0.94	39.0	0.6	2.20	0.9	0.9	0.9	0.9	6.2	6.6	7.2	7.80	4
0.75	24/0.2	1.13	26.0	0.6	2.50	0.9	0.9	0.9	0.9	6.8	7.2	7.9	8.60	7
1.00	32/0.2	1.31	19.5	0.6	2.60	0.9	0.9	0.9	1.0	7.0	7.5	8.1	9.00	11
1.50	48/0.2	1.60	13.3	0.6	2.90	0.9	0.9	1.0	1.0	7.6	8.1	9.0	9.90	14
2.50	80/0.2	2.08	7.98	0.7	3.60	1.0	1.0	1.0	1.0	9.2	9.9	10.7	11.70	19
4.00	56/0.3	2.60	4.95	0.8	4.30	1.0	1.0	1.0	1.0	10.6	11.3	12.4	13.80	26

HPL 650/1100V Grade Multi Strand Flexible Copper Conductor, PVC Insulated and Sheathed Multi-Core Cables Conforming to IS : 694/1990 with ISI Mark

Conductor Area	No. & Size of Strand	Cond. Bunched Dia (Approx)	Max. DC Resistance at 20°C	Insulation Thickness Nominal	Core Dia. (Approx)	Sheath Thickness Nominal			Overall Diameter Approx.			#Current Rating
						2 Core	3 Core	4 Core	2 Core	3 Core	4 Core	
Sq. mm.	mm.	mm.	Ohm/km	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	Amp.
6	84/0.30	3.20	3.30	0.80	4.90	1.10	1.10	1.20	12.00	12.80	14.20	37
10	140/0.30	4.67	1.91	1.00	6.60	1.20	1.20	1.30	15.90	17.00	19.00	42
16	226/0.30	6.00	1.21	1.00	8.00	1.30	1.30	1.40	18.80	20.00	22.40	57
25	354/0.30	7.51	0.78	1.20	10.00	1.40	1.50	1.60	22.80	24.60	27.40	71
35	276/0.40	8.74	0.554	1.20	11.40	1.50	1.60	1.70	25.50	27.50	30.60	91
50	396/0.40	10.60	0.386	1.40	13.70	1.60	1.70	1.80	30.20	32.60	36.30	120
70	550/0.40	12.56	0.272	1.40	15.60	1.80	1.90	2.00	34.60	37.00	41.20	161
95	750/0.40	14.40	0.206	1.60	17.60	1.90	2.00	2.10	39.00	42.00	46.80	200
120	954/0.40	16.30	0.161	1.60	19.50	2.00	2.10	2.20	43.20	46.30	51.60	225

HPL 650/1100V Grade Annealed Bare Flexible Copper Conductor, PVC Insulated and Sheathed Multi-Core Round Flexible Cables Conforming to IS : 694/1990 with ISI Mark

No. of Cores	Area (Sq. mm) / General Construction (No./Dia) / Conductor Dia (mm) / Nom. Insu. Thickness (MM) / Approx. Core Dia (MM)	0.5 16/.02 0.94 0.60 2.20	0.75 24/0.2 1.13 0.60 2.50	1.0 32/0.2 1.31 0.60 2.60	1.5 48/0.2 1.60 0.60 2.90	2.5 80/0.2 2.08 0.70 3.60	4.0 56/0.3 2.60 0.80 4.30
6	Nom. Sheath Thickness MM App. overall Dia. MM	0.90 8.50	1.00 9.50	1.00 9.80	1.00 10.70	1.10 13.00	1.20 15.30
7	Nom. Sheath Thickness MM App. overall Dia. MM	0.90 8.50	1.00 9.50	1.00 9.80	1.00 10.70	1.00 13.00	1.20 15.30
8	Nom. Sheath Thickness MM App. overall Dia. MM	1.00 9.30	1.00 10.40	1.00 10.70	1.10 11.90	1.20 14.40	1.30 16.90
10	Nom. Sheath Thickness MM App. overall Dia. MM	1.00 10.80	1.10 12.20	1.10 12.60	1.10 13.80	1.30 17.10	1.40 20.00
12	Nom. Sheath Thickness MM App. overall Dia. MM	1.00 11.20	1.10 12.60	1.10 13.00	1.10 14.30	1.30 17.70	1.40 20.70
14	Nom. Sheath Thickness MM App. overall Dia. MM	1.10 12.00	1.10 13.30	1.10 13.70	1.20 15.20	1.30 18.60	1.40 21.80
16	Nom. Sheath Thickness MM App. overall Dia. MM	1.10 12.60	1.20 14.20	1.20 14.60	1.20 16.00	1.40 19.80	1.50 23.20
19	Nom. Sheath Thickness MM App. overall Dia. MM	1.10 13.20	1.20 14.90	1.30 15.60	1.40 17.10	1.40 21.00	1.50 24.50
24	Nom. Sheath Thickness MM App. overall Dia. MM	1.20 15.60	1.30 17.60	1.30 18.20	1.40 20.20	1.40 24.60	1.50 28.80
30	Nom. Sheath Thickness MM App. overall Dia. MM	1.30 16.80	1.30 18.70	1.30 19.30	1.40 21.50	1.40 26.10	1.50 30.60
	Max. D.C. Conductor Resistance in ohm/Km. at 20°C. # Recommended Current Rating in AMP	39.00 4	26.00 7	19.50 11	13.30 14	7.98 19	4.95 26

Note : # Current Carrying Capacity is given considering the standard condition & basic assumptions of laying as per IS : 3961 (Part-V) 1967.

FRLS Cables

Whenever fire breaks-out in any building/complex, the burning of Cable emanates, the toxic, black smoke, which causes injury and subsequently becomes fatal to the human life. This compelled us to develop FRLS (FIRE RETARDENT LOW SMOKE) Cables. These Cables are quite safe during the fire break-out.

Construction

Conductor - Bare/annealed tinned copper
Insulation -FRLS grade PVC Compound
Standard - IS:694/1990
Sizes - 0.5 sq.mm to 400 sq.mm

Applications

'HPL' FRLS wires are ideal for use in densely populated areas :-

Houses	Buildings	Flats	Apartments
Factories	Theaters	Hospitals	Education Institutions

And also used with UPS, Invertors, battery, control panels etc. as well as areas where safety is a major criteria.

Salient Features

- Excellent fire retardant properties.
- Self Extinguishing.
- During Fire : very less toxic fumes emitted.
- Quite lesser amount of non-corrosive smoke emitted.

TECHNICAL DATA

Nominal Cross Sectional Area of the Conductor Sq. mm	Nos./Nominal Dia. of Strand No./(mm)	Nominal Thickness of Insulation (mm)	Approx. Overall Dia (mm)	Conductor Resistance at 20° C Max. Ohm/km	Current Rating (Amps.)	
					2 Wires, In Conduit/ Trunking	1 Phase # Clipped Directly to Surface or on Cable Tray
1.0	*14/.3	0.7	2.6	18.1	11	12
1.5	*22/.3	0.7	2.9	12.1	13	16
2.5	*36/.3	0.8	3.6	7.41	18	22
4.0	**56/.3	0.8	4.2	4.95	24	29
6.0	**84/.3	0.8	4.9	3.30	31	37

NOTE : - Std. Colours **-** Red, Yellow, Blue, Black & Green Normal packing length **-** 90 mtrs.

*** Conductor :** Class 2 as per IS : 8130 : 1984
**** Conductor :** Class 5 as per IS : 8130-1984
\# As per IS : 3961 Part (5)

SPECIAL TESTS ON HPL FRLS WIRES

Test	Function	Specification	Specified Values & Test	Obsd. Values
Critical Oxygen Index	To determine percentage of oxygen required for supporting combustion at room temperature of insulating material.	ASTM-D-2863	Oxygen Index: minimum 29% Test sample 7 to 15 cm long by 6.5 + 0.5 mm wide & over 3 + 0.5 mm thick in a minimum concentration of oxygen and nitrogen mixture will just support candle like burning at room temperature.	More than 32
Temp. Index	To determine at what temp. normal oxygen content of 21% in air will support combustion of insulating material.	ASTM-D-2863	Temperature Index : minimum 250° C The aforesaid procedure at various temperatures & then extrapolating to 250° C.	Around 285° C
Smoke Density	To determine the visibility (light transmission) under fire of insulating material.	ASTM-D-2843	Light Transmission : minimum 40% The test sample is exposed to flame to a 40 psi pressure for 4 minutes. The light absorption data and plotted on a graph as smoke density (%) versus time.	Around 45%
Acid Gas Generation	To ascertain the amount of hydrochloric acid gas evolved from PVC insulation of wire under fire conditions.	IEC 754 - I	Hydrochloric acid gas released : 20% max. 0.5-1 gram of the material from the wire insulation/sheath is burnt in a ceramic tube inside a tubular furnance at 800° C. The volume of corrosive gases (HCL) present in the combustion products are analyzed chemically.	Around 15%
Flammability test on group of cables	To determine flame propagation of wires in installed condition.	IEE - 383	In total 20 minutes of burning 8 ft. wire length samples with flame temp of app 1500° F. The burning of Cables should not go to the top.	Satisfactory
Flammability test	1)To determine ignition resistance & flame propagation under specified conditions.	Swedish standard No. SS-424-17	From test sample of 850mm length. The un-burnt portion shall be more than 300 mm from the top.	Satisfactory
	2)To determine ignition resistance & flame propagation under specified conditions.	IEC 332-1	In the calculated time duration of burning the Cables wire sample of 600 mm 25 mm length the length of un-burnt portion to be min 50 mm from the top.	Satisfactory
	3) To determine ignition resistance and flame propagation, especially from bunch of wire under specified conditions.	IEC 332-2	From test sample of 3.5 mtrs. length effected portion during burning, shall not reach 2.5 mtrs. above from the bottom edge of the burner.	Satisfactory

HR / ZHFR Wires & Cable

Our Heat Resistant Cables can withstand upto 105° C operating conductor Temperature. HPL HR Cables have 30% more current carrying capacity in comparison to FR Cables.

HPL Zero Halogen Fire Retardant Cables are recommended especially in a situation where high degree of safety of personnel and equipment are Used for Application like Hotels, Theaters, Hospitals, High-rise buildings, Commercial complexes, Centrally A.C. offices, Residential properties etc.

Owing to its special insulation characteristics the wires continue to provide uninterrupted power supply even during fire-keeping alive fire alarm circuits, exit lights, Lifts & other emergency Circuits.

HPL ZHFR Cables are made to International standards and carry a guarantee that far exceeds the minimum requirements.

Construction

Conductor - Bare/Tinned Annealed Copper
Insulation - Double layer insulation HR grade PVC
Sizes - 1.0 sq.mm to 150 sq.mm

SINGLE CORE, ZHFR INSULATED CABLES IN VOLTAGE GRAGE 650/1100V.

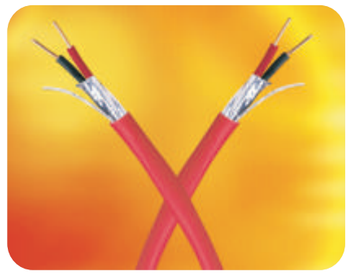
Nominal area of Conductor Sq. mm.	Number/Nom. Dia. of wire mm	Thickness of Insulation (Nom.) mm	Approx. Overall Diameter mm	Resistance (Max.) per Km. @ 20° C Ohms	Current Rating Amps.
1.0	14/.3	0.7	2.6	18.10	12
1.5	22/.3	0.7	3.0	12.10	16
2.5	36/.3	0.8	3.6	7.41	22
4.0	56/.3	0.8	4.2	4.95	29
6.0	84/.3	0.8	4.9	3.30	37

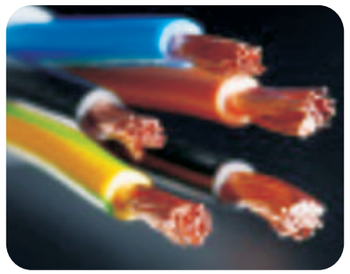
A brief comparison of PVC Cables and ZHFR Cables is given below :

Properties	HR PVC	FRLS	ZHFR
Halogen Gas (mg/g)	>200	<150(max)	<0.5(max)
Corrosive Gas (pH)	1 - 2	2 - 3	6.0
Smoke Density (Rating)	85	50	10
Usage Temperature (°C)	90	85	90
Low Temperature (°C)	-20	-40	-50
Dioxin	YES	YES	NO
Toxic Halogen Gas	YES	YES	NO
Lead	YES	YES	NO

Additional ZHFR Properties

Properties	Test Method	Value
Limited Oxygen Index	ASTM - D 2863	35%
Limited Temp. Index	ASTM - D 2863	> 300°C
Smoke Density (Light absorption)	ASTM - D 2843	< 10%
Acid Gas Generation	IEC - 60754 - 1	< 5%



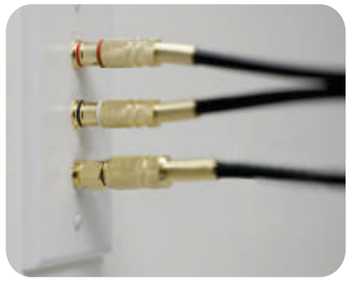


TWIN FLAT PVC INSULATED CABLES WITH ALUMINIUM CONDUCTOR
REF : IS: 694/1990 ISI MARKED

Area of Conductor Sq.mm	No. of stand/ & Dia (mm)	Nom. Insulation Thickness (mm)	Overall Dimensions (App)		Resistance at 20° C Ohm/Km (Max.)	Current Rating (Amp.)
			Height (mm)	Width (mm)		
2.5	1/1.78	0.70	5.40	8.60	12.1	18
4.0	1/2.24	0.80	6.20	10.20	7.41	23
6.0	1/2.76	0.80	6.80	11.20	4.61	30
10.0	1/3.57	1.00	8.00	13.60	3.08	40
16.0	7/1.70	1.00	10.00	17.20	1.91	51

4 CORE PVC INSULATED CABLES WITH ALUMINIUM CONDUCTOR
REF : IS: 694/1990 ISI MARKED

Area of Conductor Sq.mm	Nom. Insulation Thickness (mm)	Nom. Sheath Thickness (mm)	Approx. overall Diameter (mm)	Conductor Resistance at 20°C (Max.) Ohm/Km	Current Rating (Amp.)
2.5	0.70	1.00	10.00	12.10	18
4.0	0.80	1.10	11.80	7.41	23
6.0	0.80	1.20	13.20	4.61	30
10.0	1.00	1.30	16.30	3.08	40
16.0	1.00	1.40	20.20	1.91	51
25.0	1.20	1.60	25.00	1.20	70
35.0	1.20	1.70	28.00	0.868	86
50.0	1.40	1.80	32.50	0.641	105



Submersible Cables

HPL is one of the most unique & versatile product. An example of our fine workmanship, is our flexible cables for submersible pump motors. Widely accepted & acclaimed, it enjoys the reputation of being the best in industry.

Construction

Conductor - Stranded bare annealed electrolytic grade copper
Insulation - Specially formulated PVC (Type A)
Outer Sheath - Specially formulated PVC (ST-1)
Size - 1.0 to 95.0 Sq mm three core flat and shape. (round submersible cable can be specially asked for.)
Standard - IS 694 /1990

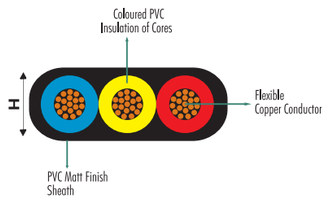
Applications

PVC insulated multistrand annealed bare copper conductor, three core flat cable

HPL Cable 3-Core Flat Cables for Submersible Pump Motors (Technical Date)

Area (Nom.) Sq.	Number/ size of Wire	Insulation Thickness (Nom.)	Sheath Thickness (Nom.)	Width 'W' (Approx)	Height 'H' (Approx)	Resistance at 20°C (Max.)	Current carrying capacity at 40°
mm.	No./mm	mm.	mm.	mm.	mm.	Ohm/Km	Amps
1.5	22/0.3	0.6	0.9	10.80	4.80	12.10	14
2.5	36/0.3	0.7	1.0	13.00	6.00	7.41	18
4.0	56/0.3	0.8	1.1	15.20	6.10	4.95	26
6.0	84/0.3	0.8	1.1	17.00	7.20	3.30	31
10.0	140/0.3	1.0	1.2	23.00	9.30	1.91	42
16.0	226/0.3	1.0	1.3	27.00	10.80	1.21	57
25.0	354/0.3	1.2	1.5	33.00	13.00	0.780	72
35.0	495/0.3	1.2	1.6	37.00	14.60	0.554	90
50.0	703/0.3	1.4	1.7	44.00	17.00	0.386	115
70.0	356/0.5	1.4	2.20	51.00	20.00	0.272	143
95.0	475/0.5	1.6	2.40	58.50	23.00	0.206	165

* **Conductor :** Class 2 of IS : 8130/84



Salient Features

- Bright annealed electrolytic grade copper having 100% purity and maximum conductivity to ensure minimum power losses. Cores are insulated on modern & precision machines using specially formulated PVC compound having very high thermal properties.
- Indigenous PVC compound provides better ageing properties, higher operating temperature & enhance insulation characteristics.
- Outersheath for Submersible Cables is designed to fit closely, maintain flexibility, resist water absorption, abrasions, oil, grease and other environmental effects.

Coaxial Cables

With more and more number of TV channels signal cable now carries more frequency signals then earlier. To cater this need, HPL manufactures CATV coaxial cables specially for such high frequency application. Specially formulated jacked PVC adds mechanical strength, abrasion resistance to cable. Our Coaxial cables ensures noise free, signals with negligible losses and enhanced performance even at higher frequency applications.

Construction

Conductor - Solid/Stranded bare annealed electrolytic grade copper
Insulation - PE foam and solid
Braiding/Taping - Copper ABC/ATC Wirebraiding / aluminium taping/foiling
Quter Sheath - Specially formulated PVC
Size - RG and UR series BS:2316/MIL-C-17

Applications

For signals transmission for satellite TV telecom, microwave signals and Close Circuit TV.

Salient Features

- Double screening over the dielectric i.e polyester baked aliminium tape with 100% coverage is done and an additional layer of shielding in the form of fine tinned copper braid ensures the low loss in cables and ensure better and high quality of reception and transmission of signals.
- Specially formulated PVC for Outersheath with added resistance to sunlight makes it suitable for outdoor installations.

Cable Type	RG 59 (Solid)	RG 59 (Foam)	RG 6 (Solid)	RG 6 (Foam)	RG 8 (Solid)	RG 8 (Foam)	RG 9 (Solid)	RG 11 (Foam)
Conductor Diameter	0.70	0.70	0.90	0.90	1.01	1.01	1.15	1.62
Dia over dielectric	4.0	4.0	4.6	5.0	5.1	5.6	6.0	7.6
Overall Diameter	6.2	6.2	7.0	7.5	7.7	8.3	8.7	10.5
Impedence	75	75	75	75	75	75	75	75
DC resistance of conductor	46	46	28	28	22	22	17	8.8
Capacitance	67	53	67	53	67	53	67	53
Velocity of propogation	66	80	66	80	66	80	66	80

ATTENUATION AT DIFFERENT FREQUENCIES

Attenuation at 20° C (Db/100 yards) MHZ	RG 59 (Solid)	RG 59 (Foam)	RG 6 (Solid)	RG 6 (Foam)	RG 8 (Solid)	RG 8 (Foam)	RG 9 (Solid)	RG 11 (Foam)
100	8	6	6	5	5	4.5	4	3.5
200	12	11	10	9	9	8	8	6
300	16	15	14	12	12	11	11	8
500	21	20	19	16	16	14	15	11
800	27	27	25	21	21	18	20	15

Above parameter may very under different using conditions.