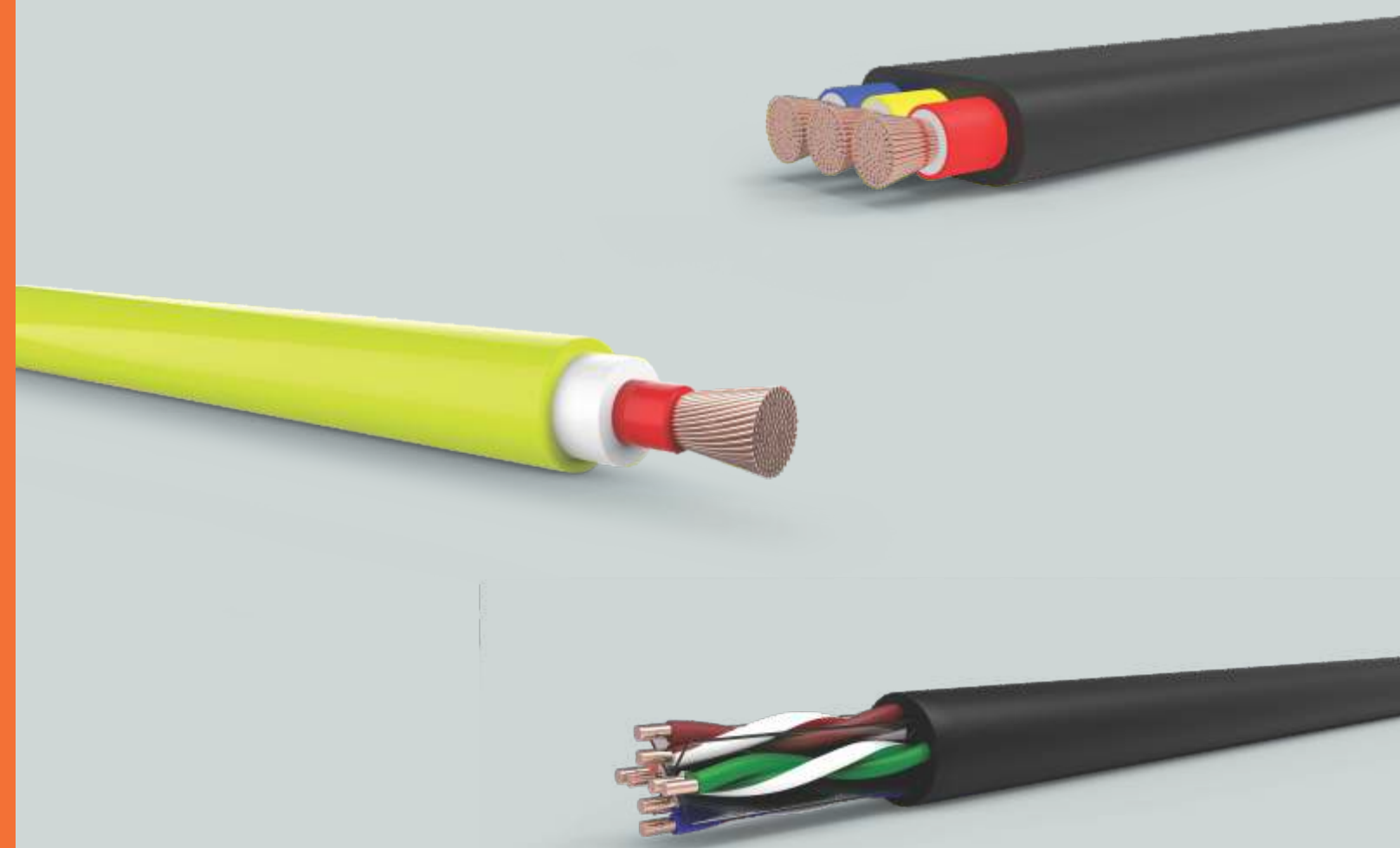




www.vihanmodular.com



VIHAN
SPREAD THE LIGHT

TRI guard

FIREGUARD

**ONELAY
ECOGUARD**

- CO-AXIAL • LAN CABLES • SPEAKER WIRES
- ROUND MULTICORE CABLES • FLAT SUBMERSIBLE CABLE

WHAT DRIVES US



PRODUCT AVAILABLE

PVC 70°C - IS 694, IS 8130 Class 2(1.5 & 2.5 Sq. mm), for others class 5, IS 5831 Type A insulation & ST-1 sheath.
HR 85°C - IS 694, IS 8130 Class 2(1.5 & 2.5 Sq. mm), for others class 5, IS 5831 Type C insulation & ST-2 sheath.

DATA CHART

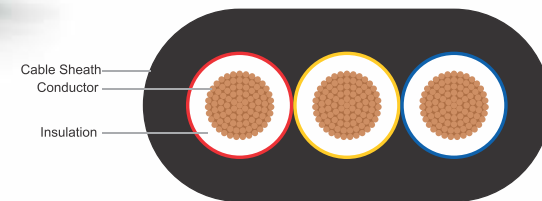
CABLE DESIGN PARAMETERS

Nominal Cross Sectional Area (Sq. mm)	No of Strands / Max. strand dia. (mm)	Nom. Insulation Thickness (mm)	Nominal Sheath Thickness (mm)	Maximum Overall Dimensions (W x H) (mm x mm)
1.5*	22/0.3	0.6	0.9	12.0 X 5.6
2.5*	36/0.3	0.7	1.0	13.0 X 6.2
4	56/0.30	0.8	1.0	15.3 X 7.1
6	84/0.30	0.8	1.1	19.2 X 8.4

*Conductor configuration offered for 1.5 Sq. mm - 22 / 0.3 mm, 2.5 Sq. mm - 36 / 0.3 mm (max.), class 2 as per IS 8130.

FLAT SUBMERSIBLE CABLE

MEET THE UNDERWATER
EXPERT.



TECHNICAL SPECIFICATION

APPLICATION

The PVC insulated and sheathed 3 core flat cables are mainly used in pump connections. They are also used in many industrial applications. The sheath is specially made out to resist tough and difficult condition of usage, excellent resistant to water, conditionally resistant to water and grease.

TECHNICAL DATA

Approvals : IS 694 marked

Conductor : Electrolytic grade annealed copper

Core Colour : Red, yellow (centre core), blue

Sheath Colour : Black

Packing : Standard packing of 100 mtr. in coils. Longer length available on request.

VIHAN
SPREAD THE LIGHT



WHAT DRIVES US

At Vihan, we constantly strive to make life simpler and safer for our customers. With the perfect blend of expertise and experience, we develop world-class cables that cater to the widest needs across household and industrial sectors.

Our cutting-edge technology combined with our relentless pursuit for innovation ensures that you're always connected. Whenever, Wherever.



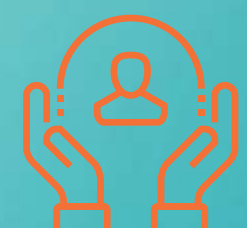
Comprehensive
Product Range



Assured Quality



Innovative
Solutions



Excellent
Customer Service

THE **NEXT BIG** THING IN THE WORLD OF **CABLES** IS HERE!

WELCOME TO THE WORLD OF **Stackpak®**

Vihan brings to you a path-breaking and innovative cable packaging solution **Stackpak**.

Stackpak is the latest revolution in cable packaging. Its dynamic and versatile design is far more convenient compared to cardboard packaging.

It is available in 0.75, 1.0, 2.0, 2.5, 4.0 Sq. mm wires and offers superior stacking and handling performance. Pulling from this packaging is not only effortless, but its portability eliminates the usual need for setup.

Its no loop technology is the most ideal solution to the problem of tangled cables commonly faced at job sites. Once the job is done, there is no need for rewinding and the storage is quicker. Thus turning the complicated task of cleanup into a no big-deal. By taking complete advantage of this the **Stackpak** technology, you can improve the work efficiency by up to 60% and enjoy a higher degree of safety, professionalism and profitability.



CABLE DESIGN PARAMETERS

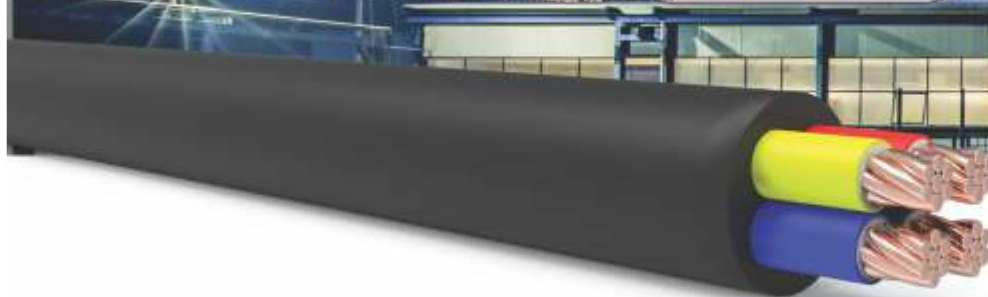
No. of Cores	Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Nominal Thickness of Sheath	Maximum Overall Dimensions (mm)
2	1	0.60	0.9	8.2
3	1	0.60	0.9	8.6
4	1	0.60	0.9	9.2
2	1.5	0.60	0.9	8.8
3	1.5	0.60	0.9	9.2
4	1.5	0.60	0.9	10.0
2	2.5	0.80	1.0	10.5
3	2.5	0.80	1.0	11.0
4	2.5	0.80	1.0	12.0
2	4	0.80	1.0	12.0
3	4	0.80	1.1	13.0
4	4	0.80		14.0
2	6	0.80	1.1	13.5
3	6	0.80	1.1	14.5
4	6	0.80	1.2	15.5

COLOUR CODE

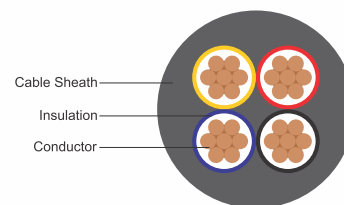
Number of Cores	Colour Code
1	RD/YL/BL/BK/WH/GY
2	RD/BK
3	RD/YL/BL
4	RD/YL/BL/BK

ROUND MULTICORE CABLES

MULTIPLE NEEDS.
ONE SOLUTION.



REACH | RoHS | CE



TECHNICAL SPECIFICATION

APPLICATION

PVC and FR PVC 70°C cables suitable for wiring in residential and commercial infrastructure.
HR PVC 85°C cables are suitable for wiring in residential and commercial infrastructure for a higher ambient temperature.

TECHNICAL DATA

Approvals : IS 694 marked,
Conductor : Electrolytic grade annealed copper
Core Colour : Refer colour code table
Sheath Colour : Black, grey and white
Packing : Standard packing of 100 mtr. in coils.

PRODUCT AVAILABLE

PVC 70°C - IS 694, IS 8130 Class I & 2, IS 5831 Type A insulation & ST-1 sheath
HR 85°C - IS 694, IS 8130 Class I & 2, IS 5831 Type C insulation & ST-2 sheath
FR 70°C - IS 694, IS 8130 Class I & 2, IS 5831 Type A insulation & ST-1 (FR) sheath
HR 85°C + FR - IS 694, IS 8130 Class I & 2, IS 5831 Type C insulation & ST-2 (FR) sheath

VIHAN
SPREAD THE LIGHT

Stackpak™

The Most Innovative Solution
For Wires & Cables

- Superior Stacking And Handling
- No Tangled Cables
- Easy To Carry
- Improve The Work Efficiency By Up To 60%
- Prevent Wastage Of Wires Upto 30%



OUR COMMITMENT TOWARDS QUALITY

When it comes to quality, we make no compromise. We meticulously check and inspect the products at every stage of our manufacturing process. Our aim is to not only meet the industry standards but to exceed customer demands and offer paramount level of safety and reliability.

Our Quality Assurance tests are carried out in 3 stages :

- 1) Raw Materials Inspection
- 2) In-process Inspection
- 3) Finished Product Inspection



RAW MATERIALS INSPECTION

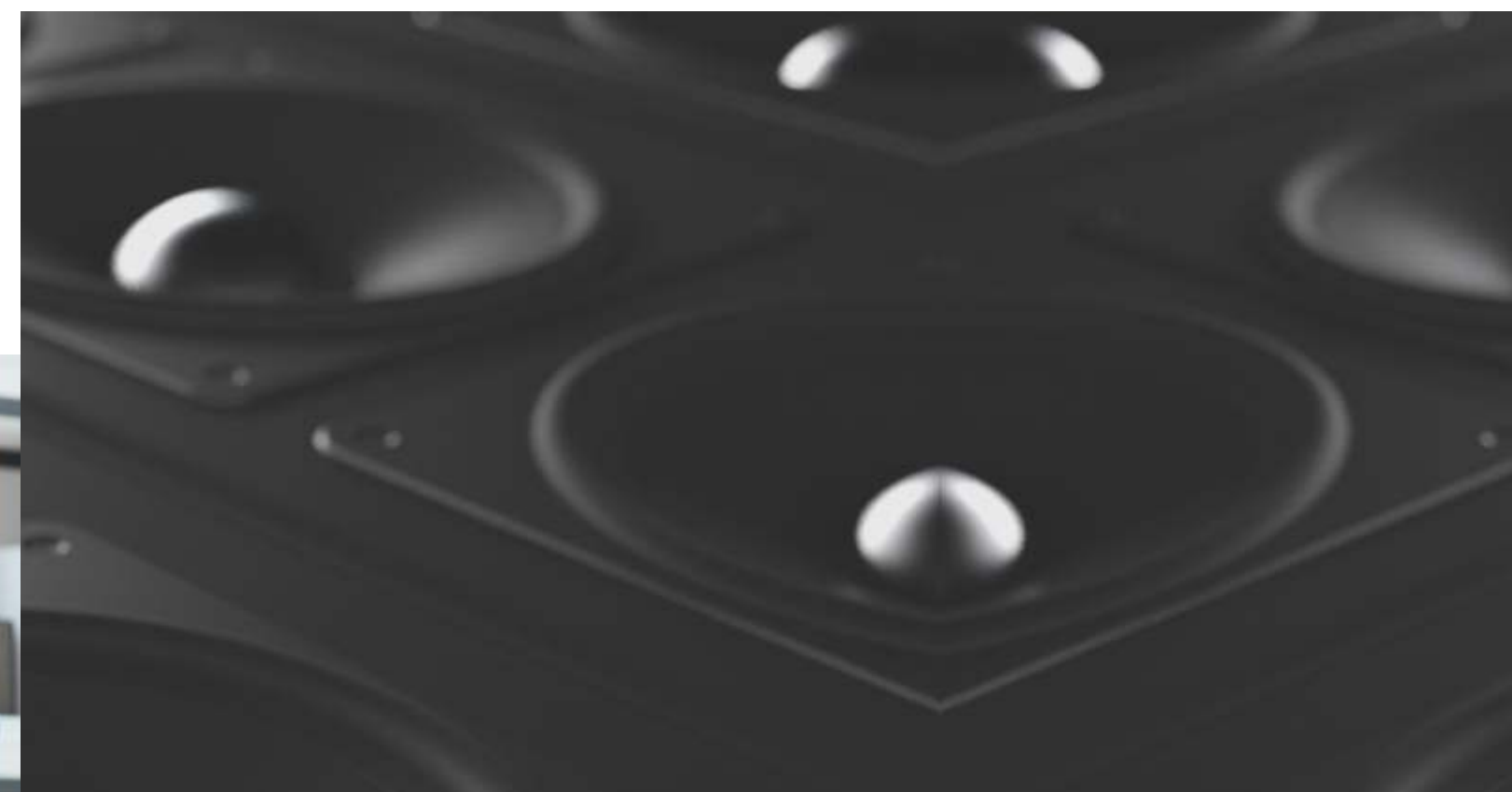
All our raw material is sourced only from internationally approved companies. Once the product is received at our end with product certification, it again goes through a stringent inspection process to meet our internal standards before it is released for production.

IN-PROCESS INSPECTION

Our qualified and skilled personnel personally test and inspect the materials at every stage of the process and ensure that it complies with the requirements before the next process.

FINISHED PRODUCT INSPECTION

Our endeavor to deliver the finest quality to our customers. Finished products that conform to our 100% quality and safety tests are released into the market for customer usage.



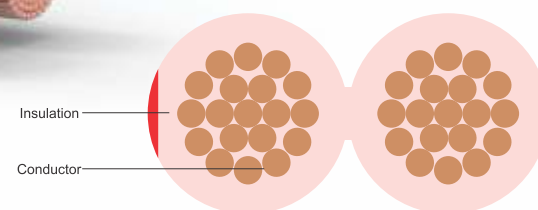
DATA CHART

CABLE DESIGN PARAMETERS

Equivalent AWG	Conductor Construction		Maximum Overall Dimensions (W x H) (mm)
	Nominal Cross Sectional Area (Sq. mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	
22	0.5	39.0	4.2 x 2.1
19	0.75	26.0	4.7 x 2.4
18	1	19.5	5.7 x 2.9
16	1.5	13.3	6.0 x 3.0
14	2.5	7.98	7.0 x 3.6
12	4	4.95	8.4 x 4.1
10	6	3.30	9.6 x 4.7

SPEAKER WIRES

AMPLIFY YOUR
MUSIC EXPERIENCE.



TECHNICAL SPECIFICATION

APPLICATION

Speaker cables are highly recommended for use in connecting speakers, public address system for clear and distortion free voice with low dB loss.

CABLE CONSTRUCTION

The cables are manufactured with bright annealed plain flexible electrolytic grade copper conductor, bunched compactly, insulated with specially formulated PVC compound. Each core is uniquely designed for easy identification. In order to offer uniform capacitance throughout length the distance between the two conductors is maintained uniformly.

Packaging : The delivery length is available in 100 mtr. coils

RoHS COMPLIANT

Substances such as lead, mercury, chromium etc. can be harmful for the environment and dangerous to health. Restriction of Hazardous Substances, commonly referred to as ROHS, is a directive adopted by The European Union restricting the use of specific hazardous materials found in electric and electronic equipment.

Vihan cables are certified by the Bureau Veritas for ROHS compliance as per directive 2006/95/EC. We are proud towards making our contributions towards an eco-friendly environment.



BEST COPPER USED

Vihan wire use ETP grade annealed copper which is more than 99.95% pure and therefor ensures 101% conductivity (IACS)

**ANNEALED COPPER ETP GRADE
101% CONDUCTIVITY (IACS) USED**

More than **99.95%**



HIGH INSULATION RESISTANCE

Leakage of current from the live conductor through the insulator is a common problem in all cables. But in case of inferior insulation, the current leakage can increase, causing damage to installations and posing serious threat to life. Vihan Low Leakage Current wires have a leakage limit, 50 times less than the prescribed international safety norms.

According to the international safety norms, the current leakage limit for hand held equipment is considered safe, if it doesn't exceed 0.75 mA. Vihan cables with high quality insulation ensure that the leakage is as low as 0.0 mA. Vihan cables have been certified by the Central Power and Research Institute - a premier laboratory certified by the Government of India.

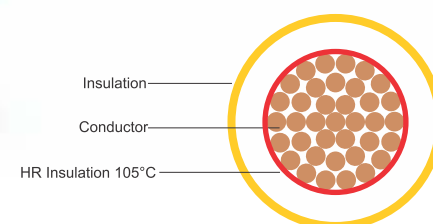


Nominal area of conductor	Leakage current (m Amps)
0.75	0.009
1.00	0.009
1.50	0.010
2.50	0.011
4.00	0.013
6.00	0.015

TRI guard
FIRE RETARDANT CABLES



**SAFETY,
NOW
3 TIMES MORE.**



TECHNICAL SPECIFICATION

3-LAYER INSULATION | HEAT RESISTANT AND FLAME RETARDANT CABLE.

APPLICATION

Suitable for wiring in all types of residential and commercial infrastructure, where fire and electrical safety is utmost important.

TECHNICAL DATA

- **Approvals** : IS 694 marked.
- **Voltage Grade** : Up to and including 1100V
- **Insulation** : All 3 layers of Insulation are specially formulated grade of PVC compound is capable of withstanding higher conductor temperatures with Heat Resistant and Flame retardant properties. The HR FR property retards the propagation of flame without comprising safety.

Insulation Confirmity : IS 5831 Type C-HR 105°C, FR 70°C.
Colours: Red, yellow, blue, black, green, grey & white
Marking : The cables are printed with marking of "VIHAN TRI Guard FR".
Packing : 90 mtr. coil is packed in "STACKPAK" upto 4.0 sq.mm with protective cartons. Project coils of 180 mtr. also available

Mechanical and Environmental Properties

Max. Tensile Load :	10 Kgs. per simplex cable (Installation)
Min. Bend Radius :	8 x Outer Diameter (Installation) 4 x Outer Diameter (Operation)
Temp. - Installation :	0°C to +50°C
Temp. - Operation :	-10°C to +60°C

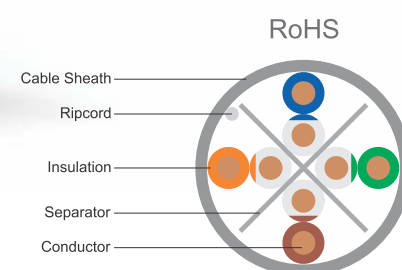
DATA CHART

ELECTRICAL PARAMETERS AT 20°C

Electrical Characteristics at 20°C	Specifications	Typical Performance	
		CAT 6	CAT 6a
Conductor loop resistance	Max. 190/100m	140/100m	120/100m
Conductor resistance unbalance	Max. 2%	0.5%	0.5%
Dielectric strength	1.0 kV DC or 0.7 kV AC for 1 min.	100% in process test	100% in process test
Insulation resistance	>500 MΩ/Km at 100-500V test voltage	>500 MΩ/Km	>500 MΩ/Km
Capacitance unbalance to earth	Max. 160 pF/100m	40 pF/100m	40 pF/100m
Velocity of propagation	<534 nsec/100m at 100MHz	496 nsec/100m at 100 MHz (NVP for hand held testers = 0.69)	490 nsec/100m at 100 MHz (NVP for hand held testers = 0.69)
Skew	Max. 40 nsec/100m at 100MHz	Max. 30 nsec/100m at 100 MHz	Max. 35 nsec/100m at 100 MHz
Mean characteristic impedance	1000 ± 50 at 100 MHz	1000 ± 30 at 100 MHz	1000 ± 30 at 100 MHz
Coupling attenuation up to 1 Ghz	Min. 40 dB	50 dB	56 dB

LAN CABLES

CONNECT WITH THE WORLD. FASTER.



TECHNICAL SPECIFICATION

APPLICATION

CAT 6a UTP cables are high performance cables used increasingly for modern computer network systems. These cables form the back bone of modern data transmission in industries, residential and commercial infrastructure.

TECHNICAL DATA

Performance : CAT 6 UTP capable of handling 100 + Mbps data rates. CAT 6a UTP is independently verified to exceed the requirements of EN 50173, ISO/IEC 11801 and TIA/EIA 568-B-1/B-2.

CABLE CONSTRUCTION

Conductor : Solid bare copper
Insulation : High density polyethylene
Pair : 2 Insulated conductors twisted together
Outer Jacket : FR PVC

APPLICABLE INTERNATIONAL STANDARDS FOR CABLE CONSTRUCTION

ISO/IEC 11801:2002
 ISO/IEC 61156-5
 EN 50173 -1:2002
 EN 50288-3-1
 ANSI/TIA/EIA 568B-2:2002

DATA CHART

CABLE DESIGN PARAMETERS

Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Number *Nominal Dia. of Strands	Approx. Overall Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Current Rating (Amps)	
					Casing	Concealed
0.75	0.6	24/0.2	2.3	26.0	9	8
1	0.7	14/0.3	2.7	18.1	14	13
1.5	0.7	22/0.3	3.0	12.1	18	16
2.5	0.8	36/0.3	3.7	7.41	24	20
4	0.8	56/0.3	4.1	4.95	30	26
6	0.8	84/0.3	4.6	3.30	38	33
10	1.0	140/0.3	7.0	1.91	52	45
16	1.0	126/0.4	8.1	1.21	70	60

*Conductor as per IS 8130

PROPERTIES

Limited Oxygen Index Test as per IS 10810 P-58 - > 29%

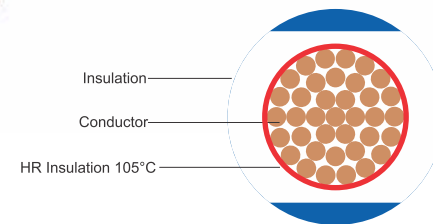
Limited Temp. Index Test as Per IS 10810 P-64 - >250°C

Packing : Available in easy pull box of 101 mtr. and 305 mtr. for CAT 5e and CAT 6 is available only in 305 mtr. pack

FIREGUARD
FR-LS



FIREGUARD IN. SMOKE OUT.



TECHNICAL SPECIFICATION

3-LAYER INSULATION | HEAT RESISTANT AND FLAME RETARDANT LOW SMOKE

APPLICATION

Suitable for use in conduit and for fixed, protected installation particularly suitable for wiring in fire and explosion prone areas, chemical factories, densely wired areas, public buildings, schools, hospitals, commercial complexes, theatres, etc.

TECHNICAL DATA

Approvals : IS 694 marked

Voltage Grade : Up to and including 1100V

Conductor : Thin strands of electrolytic copper are multi-drawn for uniformity of resistance, dimension and flexibility

Insulation : Specially formulated Heat Resistant and Flame Retardant Low smoke compound is used. The insulation bonding the conductor being Heat Resistant increases the performance of the Cable in fire situation. The insulation does not melt, drip or spread the fire conditions. The smoke is negligible, transparent and non-toxic.

Insulation Conformity : IS 5831 Type C-HR 105°C, Type A/D FR-LS 70°C.

Colours : Entire cable has white base and a double strip of red or yellow or blue or black or green or grey running along the cable length

Marking : The cables are printed with the marking of "VIHAN FIREGUARD HR-FR-LS"

Packing : Only available in 180 mtr. project coil packed in protective cartons.

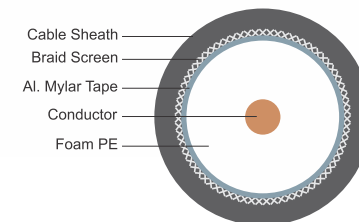
DATA CHART

CABLE DESIGN PARAMETERS

Construction Details		Cable Type
		RG 6
Inner Conductor		Copper
Nominal Diameter (mm)		1.02
Dielectric		Foam PE
Nominal Diameter (mm)		4.5
Outer Conductor	First	Bonded AL Tape
	Second	Tinned Cu/Al Braid
Nominal Coverage (%)		60
PVC Jacket		Black
Nominal Cable Diameter (mm)		7.0

CO-AXIAL

UNINTERRUPTED RECEPTION.
UNINTERRUPTED FUN.



TECHNICAL SPECIFICATION

APPLICATION

High quality co-axial for cable TV network for notch free attenuation values over wide range of frequencies. The special jacketing offers increased life even in rugged conditions.

TECHNICAL DATA

Conductor : The central conductor is made of solid electrolytic grade annealed plain copper conductor, which has distinct advantages over traditional copper conductor

Insulation : The insulation provided over the conductor is of foam PE which acts as a dielectric

Screen : Aluminium mylar tape is provided over the insulated conductor to shield the conductor and ensure disturbance free transmission of signals

Braiding : The braiding is generally provided with 60% coverage of ATC (Annealed Tinned Copper) / Al alloy

Marking : The cables are marked 'VIHAN CO-AX'

DATA CHART

CABLE DESIGN PARAMETERS

Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Number *Nominal Dia. of Strands	Approx. Overall Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Current Rating (Amps)	
					Casing	Concealed
1	0.7	14/0.3	2.7	18.1	14	13
1.5	0.7	22/0.3	3.0	12.1	18	16
2.5	0.8	36/0.3	3.7	7.41	24	20
4.0	0.8	56/0.3	4.1	4.95	30	26

*Conductor as per IS 8130.

PROPERTIES

Limited Oxygen Index as per IS 10810 P - 58 - > 29%

Limited Temperature Index as per IS 10810 P - 64 - > 250°C

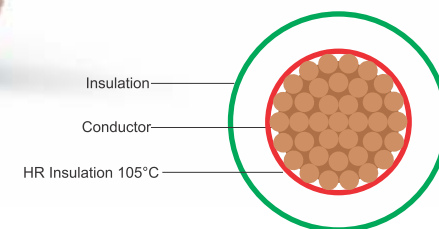
Smoke Density (Light Absorption) as per IS 13360 P - 6/Sec 9 - < 60%

Acid Gas Generation as per IS 10810 P - 59 - < 20%

**ONELAY
ECOGUARD
HR-FR-LF**



**SECURE YOUR WORLD
FROM FIRE**



TECHNICAL SPECIFICATION

ONELAY CONDUCTOR | HEAT RESISTANT AND FLAME RETARDANT - LEAD FREE
Does not Propagate Flame and Fire

APPLICATION

Wiring in all installations where fire safety is of utmost importance like schools, theaters, commercial complexes, apartments, high rise buildings, laboratories, etc.

TECHNICAL DATA

Voltage Grade : Up to and including 1100 V

Conductor : Thin strands of electrolytic copper are multi-drawn for uniformity of resistance, dimension and flexibility. The drawn strands are uni-laid with high precision and compacted. Thus forming a perfectly circular conductor which enables reduction in overall diameter for space saving in high density wiring.

Conductor Speciality : The strands do not get cut when stripping the insulation. The conductor offers perfect contact at pins, terminals and sockets. Thus, eliminating spot heating and sparking.

Insulation : Specially formulated grade of Heat Resistant & flame retardant compound is used. The insulation does not burn readily. It does not melt and drip, non-toxic.

Insulation Conformity: IS 5831, Type - HR 105°C & FR - 90°C

Colours : Red, yellow, blue, black, green, grey and white

Marking : The cables are printed with marking of "VIHAN ONELAY ECO GUARD HR - FR" upto 4 Sq. mm

Packing : 90 mtr. coils packed in "STACKPAK" with protective Cartons.

DATA CHART

CABLE DESIGN PARAMETERS

Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Number *Nominal Dia. of Strands	Approx. Overall Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Current Rating (Amps)	
					Casing	Concealed
1	0.7	37/0.20	2.6	19.5	12	11
1.5	0.7	37/0.22	3.0	13.3	16	15
2.5	0.8	61/0.22	3.6	7.98	23	19
4	0.8	61/0.30	4.1	4.95	30	26

*Conductor as per IEC 60228. # Traditionally bunched conductor

PROPERTIES

Limited Oxygen Index as per ASTM - D 2863 - >32%

Limited Temperature Index as per ASTM - D 2863 - > 250°C

Smoke Density (Light Absorption) as per ASTM - D 2843 - < 10%

Acid Gas Generation as per IEC - 60754 - I - <5%