

THE LONG-LASTING SHELL OF SAFETY



V-GUARD WIRES.
LONG-LASTING WIRES.



V-GUARD: A LONG-LASTING LEGACY.

For over four decades, V-Guard has lived up to the reputation of making reliable products that were designed to work efficiently and last a lifetime. And now we are taking our next quantum leap. Harnessing the learnings, insights and experiences of four decades, it will be our endeavour to understand human lives and their relationship with the tools and appliances that they use. And then to evolve a seamless experience with thoughtfully engineered products in our quest to enrich consumer lives. V-Guard has emerged as a prestigious manufacturer for availing an array of Wires and Cables befitting the demands of modern day technology. Wires and Cables from V-Guard are known for their cutting-edge product features, efficient performance and long-lasting quality.

ARIZO

POWERED BY E-BEAM TECHNOLOGY

INDIA'S FIRST
WIRES WITH THE
POWER OF

3



1

POWERED BY
E-BEAM TECHNOLOGY

2

ZERO HALOGEN
LOW SMOKE

3

ECO-SAFE
WIRES

ARIZO

(E-BEAM ZHLS – MELT RESISTANT – ECO-SAFE WIRES)

Halogen Free Flame Retardant Wiring Cables with E-Beam technology, manufactured in conformity with ISI standards at an ISO 9001, ISO 14001, ISO 45001, and ISO 50001 certified manufacturing plant, V-Guard HFFR/ZHLS wires ensure protection upto 125° C with environment-friendly building concepts of eco-safe. V-Guard Arizo wires ensure the highest level of safety with longer evacuation lead time for use in special areas like high-rise buildings, airports, shopping malls, etc. The property is equivalent to different nomenclatures in the industry like HFFR, EBXL-HFFR, XL-HFFR, ZHLS, LSZH, LSOH, ZHFR, etc., so the cables are suitable for use in any of the mentioned applications as well. V-Guard Arizo wires feature anti-termite & anti-rodent capabilities, which help increase the life of cables by preventing the attack of termites and rodents.

A combination of safety and environment-friendly products and increasing human habitation is bringing many people and families closer to each other within a single housing or commercial complex. Therefore, the need for cables to be safe and efficient is paramount. The V-Guard Arizo wires are made using E-Beam technology, which helps to cross-link double bonding on the polymer, enabling superior quality features to meet international standards and high operating temperatures up to 125° C. Therefore, they are safe, reliable, and long-lasting wires. E-Beam technology is widely used for aerospace, railway, and defense cable applications for the high stability of the product.

SALIENT FEATURES



- Melt-resistant wires with E-Beam technology – These wires withstand temperatures of over 90° C using E-Beam cross-linked technology to prevent melting and dripping of polymer in high operating temperatures.
- Zero Halogen Low Smoke (ZHLS) – These wires emit negligible smoke from the insulation during fire accidents and help to reduce the generation of black-colored smoke during fire hazards compared to PVC cables.
- Moisture guard – High resistance to discoloration of copper conductors to achieve a unique property in the cable industry for HFFR cables.
- High current carrying capacity - 75% higher current carrying capacity compared to existing PVC-based regular house wires available in the industry, helping to use proper wire sizes and optimize wiring costs for construction.
- Eco-safe wires – These wires do not contain hazardous chemicals and substances as per RoHS and REACH European Directives.
- Conformité Européenne (CE) marked – The product's quality is Conformité Européenne (CE) tested and marked according to the international standard BS EN 50525-3-41 and EU Directives.
- Anti-termite and anti-rodent insulation - Specially formulated anti-termite and anti-rodent technology is incorporated to resist attacks from termites and rodents for a longer lifespan.
- The high aging property of E-Beam cross-linked HFFR insulation ensures continuous operating temperature of 90° C as per IS 17048 ISI marked cable operation, assuring a long-lasting life with increased safety for continuous operations.
- 90 m assured seal on the cable.
- High conductivity of copper (102% IACS) and low conductor resistance.
- 99.97% pure copper.

APPLICATIONS

House wiring HFFR cables are designed for indoor electrification and to supply power to all electrically operated equipment (fans, lights, home appliances, etc.). They can also be used in high-temperature application areas.

TECHNICAL SPECIFICATIONS

- Product Reference Standard:- IS 17048 : 2018
- Voltage Grade:- Up to and including 1100 V.
- Conductor:- Annealed Bare Flexible Copper as per IS 8130
- Insulation:- HFI-XL 90 as per IS 17048. Cross-Linked Polyolefin Halogen-Free Flame-Retardant insulation (HFFR/ZHLS/LSZH/LSOH).
- Colours: Red, Yellow, Blue, Black, Green, Grey and White.

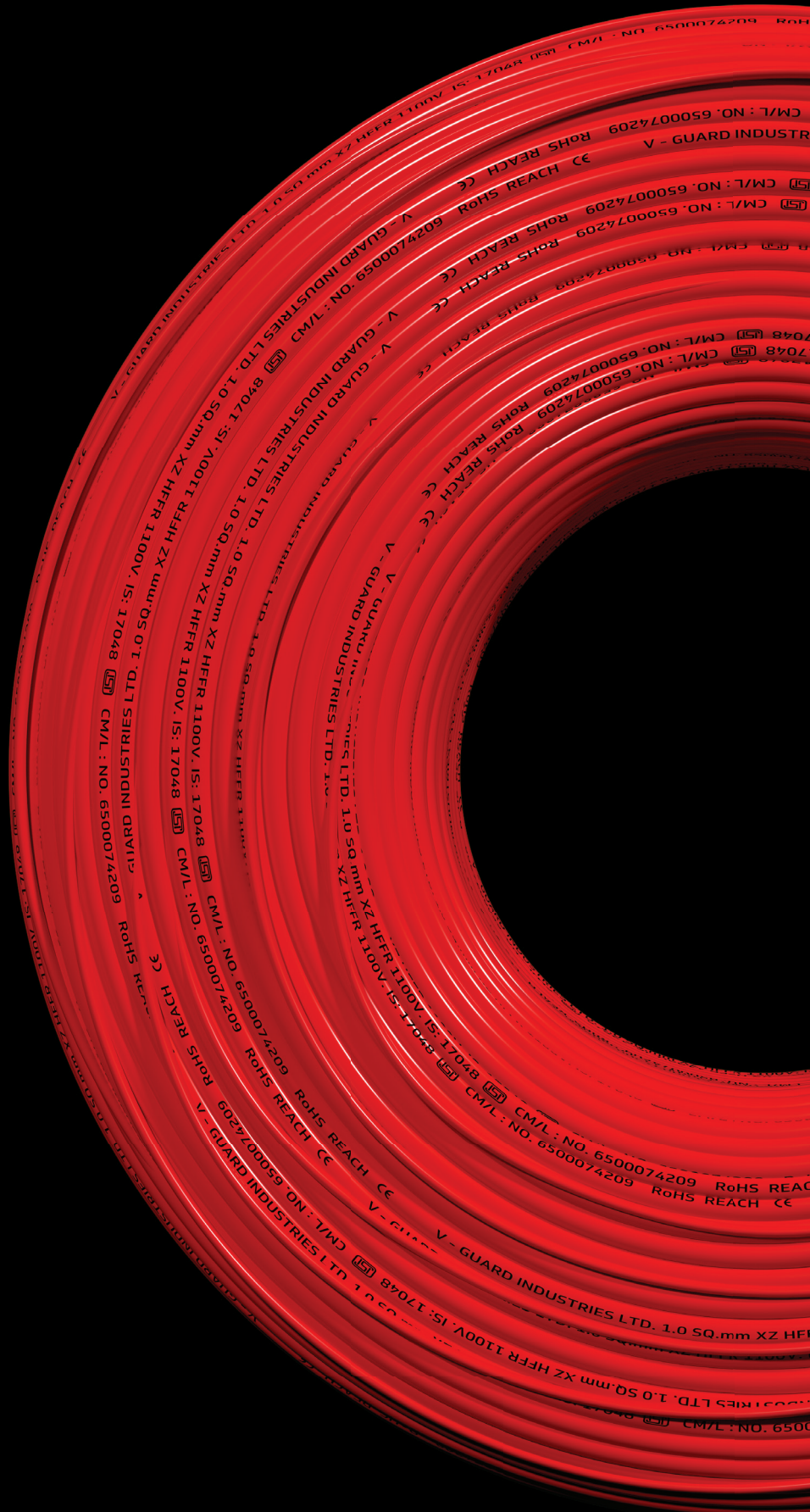
Technical Specification for Single Core, HFFR Insulated Unsheathed Cables of Voltage Grade 1100 Volts Confirming to IS 17048 : 2018						
Conductor nominal area (in Sq.mm)	Number & nominal diameter of wire (in No./mm*)	Resistance (maximum) per km @ 20° C (in Ohm)	Approximate overall diameter (in mm)	Nominal thickness of insulation (in mm)	Current carrying capacity two cables, single phase **	
					In conduit/trunking (in Ampere)	Unenclosed-clipped directly to a surface or on cable tray (in Ampere)
0.75	24/0.2	26.0	2.2	0.6	13	14
1	32/0.2	19.5	2.6	0.6	21	22
1.5	30/.25	13.30	3.0	0.7	24	27
2.5	48/.25	7.98	3.6	0.8	32	36
4	56/0.3	4.95	4.0	0.8	41	47
6	84/0.3	3.30	4.6	0.8	53	60

*Annealed bare copper class 5 conductor as per IS 8130

**Current carrying capacity values are calculated for 90° C from IEC 60287-1-1



V-GUARD INDUSTRIES LTD. 1.0 SQ.mm XZ HFFR 1100V. IS: 17048 CM/L : NO. 6500074209 RoHS REACH CE



SUPERIO+ ECO-SAFE WIRES



ECO-SAFE
WIRES



HRFR
85° C



20% EXTRA CURRENT
CARRYING CAPACITY

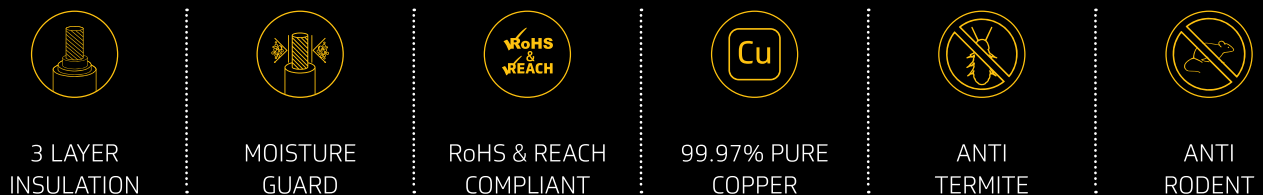


SUPERIO+ (ECO-SAFE WIRES)

Triple-layered HRFR PVC Wiring Cables with HFT Technology, manufactured in conformity with ISI standards at an ISO 9001, ISO 14001, ISO 45001 & ISO 50001 certified manufacturing plant, ensure triple protection with Heat Resistance (HR) up to 105° C for environment-friendly building concepts with eco-safe wires. V-Guard Superio+ wires feature anti-termite & anti-rodent properties, which help increase the life of cables by preventing the attack of termites & rodents. The high-quality online annealing ensures high conductivity of copper, while also preventing the breaking of the copper strands when bent or twisted, making V-Guard wires protect homes like nothing else.

A combination of safety and environment-friendly products and increasing human habitation is bringing many people and families closer to each other within a single housing or commercial complex. Therefore, the need for cables to be safe and efficient is paramount. V-Guard Superio+ wires are made from specially formulated in-house HRFR PVC polymers that enable superior quality features to meet international standards requirements. Therefore, they are safe, reliable, and long-lasting. They come with an assurance of a “90 m assured” seal, a unique marking that ensures the length of the wire is as claimed. Designed to withstand extreme temperatures (105° C), Superio+ possess Heat Resistant Flame Retardant (HRFR) properties, thus preventing propagation in case of short circuits & fire breakouts, with additional Heat Resistant prevention of HR PVC.

SALIENT FEATURES



- HRFR wires – These wires withstand temperatures up to 85° C as per IS 694 in suitable indoor high-temperature applications to enhance safety.
- Eco-safe wires – These wires do not contain hazardous chemicals and substances as per RoHS and REACH European Directives.
- Moisture guard – High resistance to discoloration of copper conductors with special polymer in triple layer concept to achieve a unique property in the cable industry.
- Triple-layer insulation - Three-layer insulation, specially formulated to operate up to 85° C as well as improved FR properties.
- Anti-termite and anti-rodent insulation - Specially formulated anti-termite and anti-rodent technology is incorporated to resist attacks from termites and rodents for a longer lifespan.
- Conformité Européenne (CE) marked – The product's quality is Conformité Européenne (CE) tested and marked according to the international standard IEC 60227-3 & EU Directives.
- The high aging property of HRFR PVC insulation ensures continuous operating temperature of 85° C, assuring a long-lasting life with increased safety for continuous operations.
- 90 m assured seal on the cable.
- High conductivity of copper (102% IACS) and low conductor resistance.
- 100% bunching.
- Better flexibility for easy wiring.
- 99.97% pure copper.

APPLICATIONS

House wiring cables for indoor electrification and power supply to all electrically operated equipment (fans, lights, home appliances, high-temperature applications, etc.).

TECHNICAL SPECIFICATIONS

- Product Reference Standard:- IS 694 : 2010
- Voltage Grade:- Up to and including 1100 V.
- Conductor:- Annealed bare flexible copper as per IS 8130
- Insulation:- PVC Type C 85° C as per IS 5831. Heat resistant Flame Retardant (HRFR PVC).
- Colours: Red, Yellow, Blue, Black, Green, Grey and White.

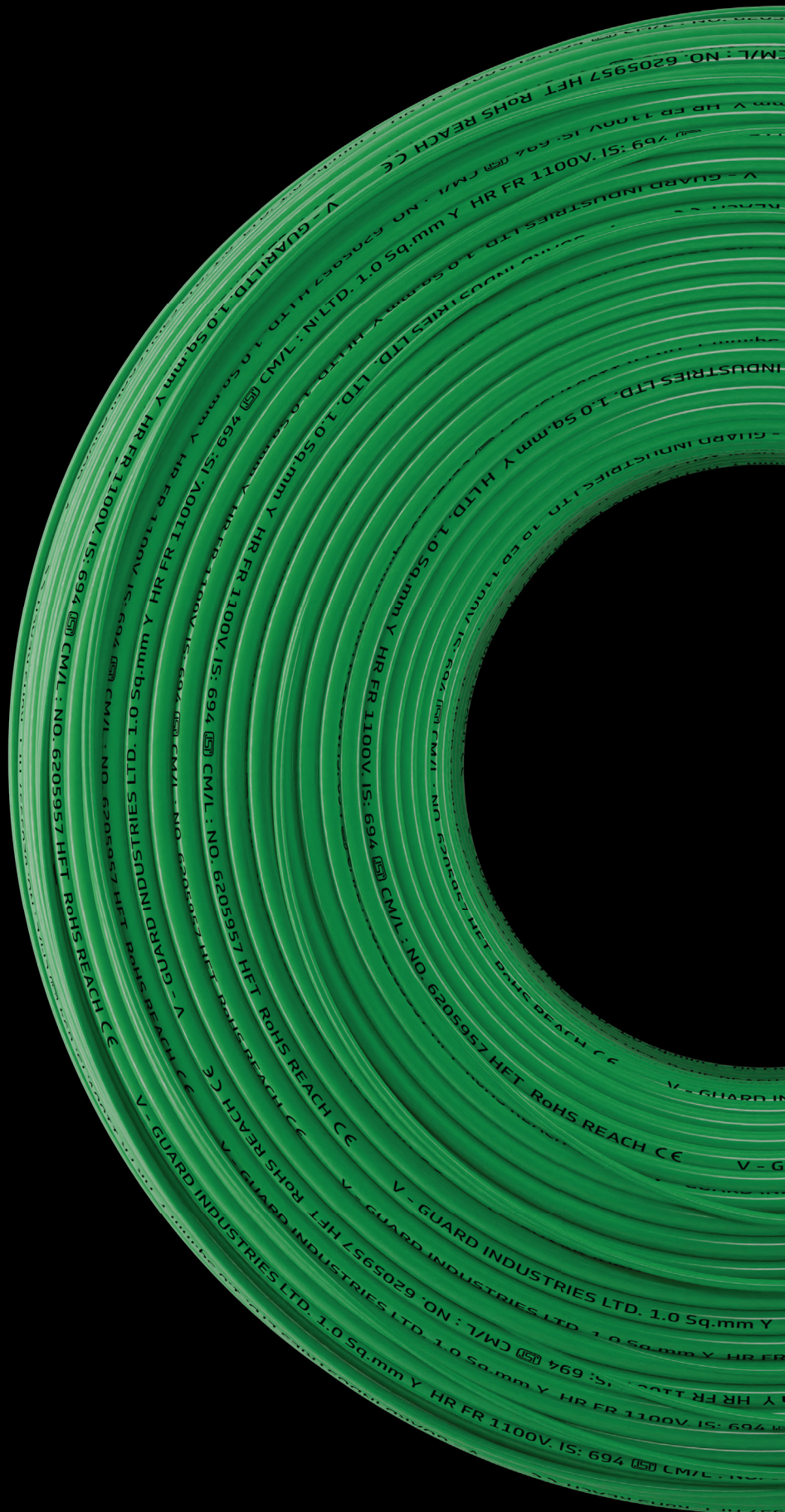
Technical Specification For Single Core, HRFR PVC Insulated Unsheathed cables of Voltage Grade 1100 volts confirming to IS 694:2010						
Conductor nominal area (in Sq.mm)	Number & nominal diameter of wire (in No./mm*)	Resistance (Maximum) per km @ 20° C (in Ohm)	Approximate overall diameter (in mm)	Nominal thickness of insulation (in mm)	Current carrying capacity two cables, single phase **	
					In conduit/trunking (in Ampere)	Unenclosed-clipped directly to a surface or on cable tray (in Ampere)
0.5	16/0.2	39.00	2.2	0.6	4	5
0.75	24/0.2	26.00	2.3	0.6	7	8
1	32/0.2	19.50	2.6	0.6	14	15
1.5	30/0.25	13.30	3.0	0.7	16	19
2.5	48/0.25	7.98	3.6	0.8	22	26
4	56/0.3	4.95	4.0	0.8	29	35
6	84/0.3	3.30	4.6	0.8	37	44

*Annealed bare copper class 5 conductor as per IS 8130

**Current carrying capacity values are in accordance with IS 3961 (Part-V):1968 calculated for 85° C



V-GUARD INDUSTRIES LTD. 1.0 Sq.mm Y HR FR 1100V. IS: 694 CM/L : NO. 6205957 HFT RoHS REACH CE



RANGE AVAILABLE



Arizo ZHLS
Cables



Superio+ HRFR
PVC Cables



FR Cables
(Superio & Classo+)



FRLSH
Cables



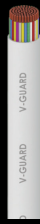
Multi-core
Round Cables



Multi-core
Flat Cables



Speaker
Cables



Telephone
Cables



Co-Axial
Cables



CAT 6
Cables



CCTV
Cables

FEATURES



High flame
retardancy



Triple layer insulation
for better safety



99.97%
pure copper



High conductivity
of copper



High thermal
stability



Bunched
conductor



90 meters
assured seal



High aging property of
PVC insulation



Better flexibility for
easy wiring



Smooth surface aids in
easy pulling, facilitating
easy installation



Copper conductors
resist discoloration



MAJOR APPROVALS & SUPPLIED PROJECTS

Government e Market (GeM) | Airport Authority of India | CPWD | Police Housing Societies | Ministry of Education | Ministry of Ports, Shipping and Waterways | Military Engineer Services | Power Grid Corporation of India | Tata Steel | IVRCL Infrastructures & Projects Ltd. | Odisha Power Transmission Corporation Limited | Nuclear Power Corporation of India | Cochin International Airport | Kochi Metro | HCL Technologies | Apollo Tyres | Siemens | Karnataka Power Corporation | Bharat Heavy Electricals Limited | BEML Limited | Bharat Petroleum | Kerala State Electricity Board | DLF | Sobha | Puravankara | Asset homes | Hoysala Projects Pvt. Ltd. | Tulsi Developers.



WIRES & CABLES DIVISION

V-Guard wires and cables manufacturing facilities are located at Coimbatore in Tamil Nadu and Kashipur in Uttarakhand. Both factories put together have the capacity to produce more than 180 lakh coils (in terms of 90 m) and 30,000 Km of Multicore Round & Flat Cables per annum. These factories boast of state-of-the-art technology, both indigenous and imported, with RBD, Wire drawing machines and Bunchers supplied by Niehoff and Triple Layer Insulating Lines supplied by Nextrom, Johann Leimbach, etc.

Description	Wires Factory, Coimbatore	Wires Factory, Kashipur	PVC Compounding Unit
Plant Address	V-Guard Industries Ltd., (Cable Division), K.G. Chavadi, Coimbatore - 05	V-Guard Industries Ltd., 6 th Km Stone, Moradabad Road, Village Basai, Khasra No. 86, Kashipur, Udham Singh Nagar, Uttarakhand - 13	V-Guard Industries Ltd., K. G. Chavadi, Coimbatore - 05





PVC COMPOUNDING DIVISION

V-Guard Wires & Cables Division has also implemented a backward integration project for producing its own PVC Grades for House Wiring Cables and Multicore Round & Flat Cables. The PVC compounding unit is a fully automated state-of-the-art modern plant established with focus on the best manufacturing practices right from the material handling to the finished goods packing for obtaining the best quality of the product consistently in a safe environment.

All raw materials used are of high quality from global and indigenous sources, which contributes to the best quality of Wires & Cables.

The PVC compounding plant boasts of machinery with the world renowned extrusion technology from Germany and a full-fledged dedicated QA lab for testing incoming raw materials and finished goods. The present capacity of the plant is 400MT per month and the next expansion project would be 500MT per month.



SUPERIO FR SERIES

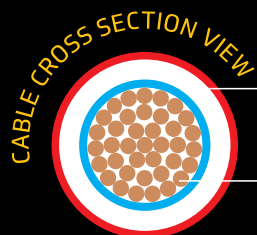
V-Guard Superio (Flame Retardant) cable can withstand continuous heat up to 70° C.

APPLICATIONS

The cables can be used in Domestic, Residential and Industrial Infrastructure projects.

FEATURES

- Anti-Termite
- Moisture Guard
- Anti-Aging
- Superior Insulation Resistance



Triple layer Insulation with FR grade PVC

High conductivity bare annealed copper conductor

TECHNICAL DETAILS

- Product Reference Standard: IS 694:2010
- Voltage Grade: Up to and including 1100 V.
- Size: 0.5 to 120 Sq.mm in single core.
- Conductor: Thin strands of multi drawn Electrolytic Copper.
- PVC Insulation: Type A/D FR 70° C as per IS 5831
- Colours: Red, Yellow, Blue, Black, Green, Grey and White.
- Marking: The cables are printed with marking of 'FR' (FR indicates Flame Retardant).
- Packing: 90 m coil is packed in protective cartons up to size 4 Sq.mm and other sizes/length in polycover.



Technical Specifications For Single Core, PVC Insulated Unsheathed Cables						
Conductor nominal area (in Sq.mm)	Number & nominal diameter of wire (in No./ mm)	Resistance (Maximum) per km @ 20°C (in Ohm)	Approximate overall diameter (in mm)	Nominal thickness of insulation (in mm)	Current carrying capacity two cables, single phase	
					In conduit/ trunking (in Ampere)	Unenclosed-clipped directly to a surface or on cable tray (in Ampere)
0.5	16/0.2**	39.0	2.2	0.6	3	4
0.75	24/0.2**	26.0	2.3	0.6	6	7
1.0	14/0.3*	18.1	2.7	0.6	11	12
1.5	22/0.3*	12.1	3.0	0.7	13	16
2.5	36/0.3*	7.41	3.6	0.8	18	22
4.0	56/0.3**	4.95	4.0	0.8	24	29
6.0	84/0.3**	3.3	4.6	0.8	31	37
10.0	80/0.4**	1.91	6.1	1.0	42	51
16.0	126/0.4**	1.21	7.2	1.0	57	68
25.0	196/0.4**	0.78	9.1	1.2	71	86

*As per conductor class 2 of IS:8130

**As per conductor class 5 of IS:8130. For BIS certification details see website "www.bis.org.in"

CLASSO+ FR SERIES



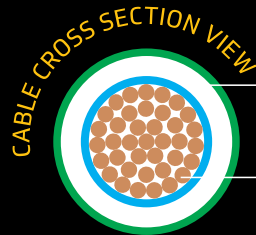
V-Guard Classo (Flame Retardant) cable can withstand continuous heat up to 70° C.

APPLICATIONS

The cables can be used in Domestic, Residential and Industrial Infrastructure projects.

FEATURES

- Anti-Termite
- Moisture Guard
- Anti-Aging
- Xtra Flex



Triple layer Insulation with FR grade PVC

High conductivity bare annealed copper conductor

TECHNICAL DETAILS

- Voltage Grade: Up to and including 1100 V.
- Size: 0.75 to 4 Sq.mm in single core.
- Conductor: Thin strands of multi drawn Electrolytic Copper.
- PVC Insulation: Type A/D FR 70° C as per IS 5831
- Colours: Red, Yellow, Blue, Black, Green, Grey and White.
- Marking: The cables are printed with marking of 'FR' (FR indicates Flame Retardant).
- Packing: 90 m coil is packed in protective cartons up to size 4 Sq.mm. Higher length cables are also available in polycover.



Technical Specifications For Single Core, PVC Insulated Unsheathed Cables						
Conductor nominal area (in Sq.mm)	Number & nominal diameter of wire (in No./mm)	Resistance (Maximum) per km @ 20° C (in Ohm)	Approximate overall diameter (in mm)	Nominal thickness of insulation (in mm)	Current carrying capacity two cables, single phase	
					In conduit/ trunking (in Ampere)	Unenclosed-clipped directly to a surface or on cable tray (in Ampere)
0.75	24/0.2	26.0	2.3	0.6	6	7
1.0	32/0.2	19.5	2.5	0.6	11	12
1.5	30/.25	13.3	2.8	0.6	13	16
2.5	48/.25	7.98	3.4	0.7	18	22
4.0	56/0.3	4.95	4.0	0.8	24	29

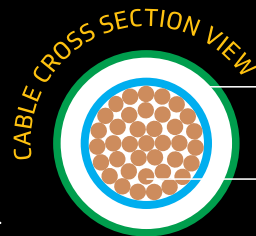
As per conductor class 5 of IS:8130. For BIS certification details see website "www.bis.org.in".

FRLSH CABLE (FLAME RETARDANT LOW SMOKE & LOW HALOGEN)

V-Guard FRLSH cables are made from specially formulated PVC polymers that restrict the toxic gases and smoke and therefore are safe, reliable, flame retardant and a non-toxic alternative.

APPLICATIONS

Cables for wiring in fire and explosion prone areas, schools, hospitals, malls, commercial complexes, theaters, airports, hotels, residential apartments, densely populated areas and public buildings.

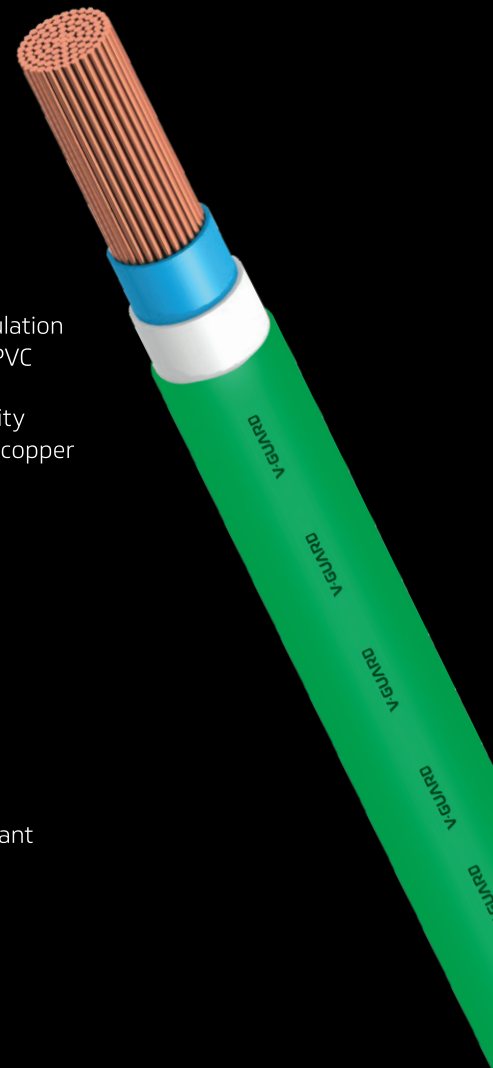


Triple layer Insulation with FR grade PVC

High conductivity bare annealed copper conductor

TECHNICAL DETAILS

- Cable Design Reference Standard: IS 694:2010
- Voltage Grade: Up to and including 1100 V.
- Size: 0.5 to 120 Sq.mm in single core.
- Conductor: Thin strands of multi-drawn Electrolytic Copper.
- PVC Insulation: Type A/D FRLSH 70° C as per IS 5831
- Colours: Red, Yellow, Blue, Black, Green, Grey and White.
- Marking: The cables are printed with marking of 'FRLSH' (FRLSH indicates Flame Retardant Low Smoke & Low Halogen).
- Packing: Packing of 180 meters coils available.



Technical Specification of Single Core, FRLSH PVC Insulated Unsheathed Cables 1100 Volts

Conductor nominal area (in Sq.mm)	Number & nominal diameter of wire (in No./mm)	Resistance (Maximum) per km @ 20°C (in Ohm)	Approximate overall diameter (in mm)	Nominal thickness of insulation (in mm)	Current carrying capacity two cables, single phase	
					In conduit/ trunking (in Ampere)	Unenclosed-clipped directly to a surface or on cable tray (in Ampere)
0.50	16/0.2	39.0	2.20	0.6	3	4
0.75	24/0.2	26.0	2.30	0.6	6	7
1.0	32/0.2	19.50	2.50	0.6	11	12
1.5	30/0.25	13.30	2.70	0.6	13	16
2.5	48/0.25	7.98	3.40	0.7	18	22
4.0	56/0.3	4.95	4.00	0.8	24	29
6.0	84/0.3	3.30	4.60	0.8	31	37
10.0	80/0.4	1.91	6.10	1.0	42	51
16.0	126/0.4	1.21	7.20	1.0	57	68
25.0	196/0.4	0.780	9.10	1.2	71	86
35.0	276/0.4	0.554	10.30	1.2	91	110
50.0	396/0.4	0.386	12.30	1.4	120	145
70.0	360/0.5	0.272	14.30	1.4	165	200
95.0	475/0.5	0.206	16.60	1.6	200	235
120.0	608/0.5	0.161	18.40	1.6	225	270
As per conductor class 5 of IS:8130-1984						

MULTI CORE ROUND CABLES

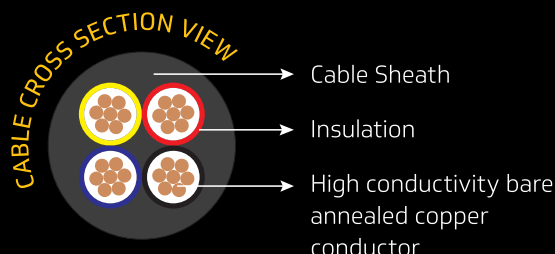
V-Guard Multicore cables are available in variant of FR & FRLSH categories.

APPLICATIONS

Flexible & Cord Cables for Residential and Commercial Infrastructure projects.

FEATURES

- Better finish and strength for heavy duty applications.
- Every "meter length" is marked.



TECHNICAL DETAILS

- Product Reference Standard: IS 694:2010
- Voltage Grade: Up to and including 1100 V.
- Size: 2, 3 & 4 cores available in sizes from 0.5 to 16 Sq.mm.
- Conductor: Electrolytic grade annealed copper class 5 as per IS 8130
- Insulation: PVC with 70° C rating as per IS 5831
- Sheath: PVC with 70° C rating as per IS 5831
- Sheath Colour: Black, Ivory, White and Grey.
- Packing: Standard packing of 100 m in coils. Longer length available on request.

Technical Specification of Multicore Round PVC Insulated and PVC Sheathed Flexible Cables, 1100 Volts											
Conductor nominal area (in Sq.mm)	Number & nominal diameter of wire (in No./mm)	Resistance (Maximum) per km @ 20° C (in Ohm)	Nominal thickness of insulation (in mm)	Nominal thickness of sheath (in mm)			Approximate overall diameter (in mm)			Current carrying capacity in Ampere (Unenclosed - clipped directly to a surface or on cable tray)	
				2 Core	3 Core	4 Core	2 Core	3 Core	4 Core	2 Core & 3 Core Cables for Single Phase AC DC/	3 Core & 4 Core Cables for Three Phase AC
0.50	16/0.2	39.0	0.6	0.9	0.9	0.9	6.2	6.5	7.0	4	4
0.75	24/0.2	26.0	0.6	0.9	0.9	0.9	6.5	6.9	7.5	7	7
1.0	32/0.2	19.5	0.6	0.9	0.9	0.9	6.9	7.4	8.0	12	10
1.5	30/0.25	13.3	0.6	0.9	0.9	1.0	7.5	8.0	8.7	16	14
2.5	48/0.25	7.98	0.7	1.0	1.0	1.0	8.9	9.4	10.3	20	18
4.0	56/0.3	4.95	0.8	1.0	1.0	1.0	10.1	10.8	11.9	27	24
6.0	84/0.3	3.30	0.8	1.1	1.2	1.2	11.5	12.4	13.6	34	30
10.0	80/0.4	1.91	1.0	1.3	1.4	1.4	14.7	15.8	17.5	44	39
16.0	126/0.4	1.21	1.0	1.4	1.4	1.4	17.0	18.1	20.0	61	55
As per conductor class 5 of IS: 8130-1984											

3 CORE FLAT SUBMERSIBLE CABLES

V-Guard three core flat cables are ideally suited for heavy duty applications mainly in submersible pumps.

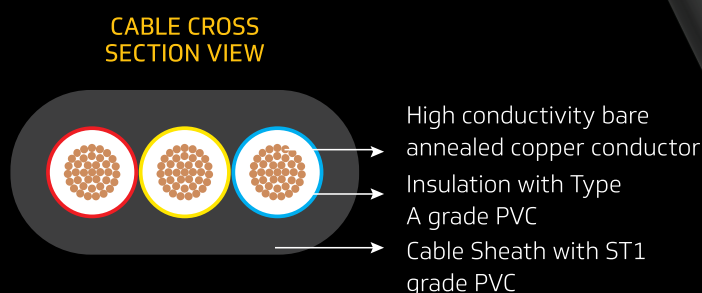
APPLICATIONS

Flat cables for Submersible Pumps & Motors.

FEATURES

- Better finish and strength for heavy duty applications.
- Non hygroscopic: High discoloration resistance capacity of copper conductors.
- High abrasion resistant.

TECHNICAL DETAILS



- Cable Design Reference Standard: IS 694:2010
- Voltage Grade: Up to and including 1100 V.
- Size: 1 to 10 Sq.mm in three cores.
- Conductor: Electrolytic grade annealed copper class 5 as per IS 8130
- Insulation: PVC with 70° C rating as per IS 5831
- Sheath: PVC as per IS 5831
- Sheath Colour: Black
- Packing: Standard packing of 500 m (coils & drum) Long length also available on request.

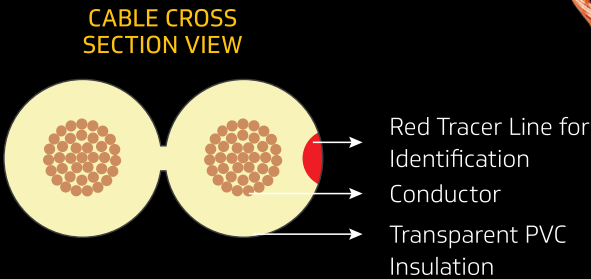
Technical Specifications of Multicore Flat PVC Insulated and PVC Sheathed Flexible Cables, 1100 Volts							
Conductor nominal area (in Sq.mm)	Number & nominal diameter of wire (in No./mm)	Resistance (Maximum) per km @ 20° C (in Ohm)	Nominal thickness of insulation (in mm)	Nominal thickness of sheath (in mm)	Approximate overall diameter (in mm)		Current carrying capacity at 40° C (in Ampere)
					Width	Height	
1.0	32/0.2	19.5	0.6	0.9	9.4	4.4	12
1.5	30/0.25	13.3	0.6	0.9	10.3	4.7	16
2.5	48/0.25	7.98	0.7	1.0	12.3	5.5	22
4.0	56/0.3	4.95	0.8	1.0	14.1	6.2	29
6.0	84/0.3	3.30	0.8	1.1	16.2	7.0	37
10.0	80/0.4	1.91	1.0	1.4	20.9	8.9	51
As per conductor class 5 of IS: 8130-1984							

SPEAKER CABLES

V-Guard Speaker Cables are designed to be used at homes for speakers & sound systems.

FEATURES

- 99.97% pure Copper.
- Better flexibility for easy wiring.
- Uniform capacitance throughout the length.
- Distortion-free voice with low dB loss.



TECHNICAL DETAILS

- Conductor: Speaker cables are manufactured with multi wire, bright annealed flexible bare electrolytic grade conductor.
- Insulation: Twin parallel insulated with specially formulated transparent grade PVC compound. For easy identification, one of the cores is marked with red tracer line all along the length of the cable.
- Packing: Available in 90 meter packed in carton.

Technical Specifications for Speaker Cables				
Conductor nominal area (in Sq.mm)	Number & nominal diameter of wire (in No./mm)	Resistance (Maximum) per km @ 20° C (in Ohm)	Approximate overall diameter (in mm)	Nominal thickness of insulation (in mm)
0.5	16/0.2	39.0	4.70 x 2.30	0.70
0.75	24/0.2	26.0	5.20 x 2.55	0.75
1.0	32/0.2	19.5	5.60 x 2.80	0.80
1.5	30/0.25	13.3	6.40 x 3.20	0.85
2.0	40/0.25	9.05	7.10 x 3.55	0.90
2.5	50/0.25	7.98	7.60 x 3.75	0.95

COAXIAL CABLE (RG6)

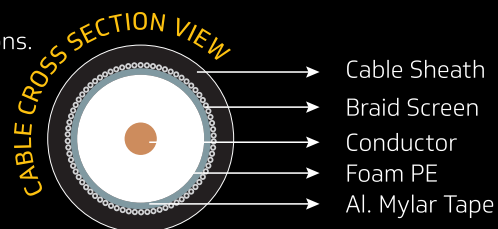


V-Guard Coaxial Cables are designed to be used at homes for television sets and also in security agencies for advanced data transmission.

SALIENT FEATURES

- Protects signals from external electromagnetic interference.
- Very low Attenuation or signal losses.
- For both analog and digital transmission.
- Special jacketing offers increased life even in rugged conditions.
- Jelly filled.

TECHNICAL DETAILS



- **Conductor:** The central conductor is made of solid electrolytic grade annealed bare copper (BC) conductor or copper clad steel (CCS) conductor.
- **Insulation:** The insulation provided over the conductor is of foam polyethylene (PE) dielectric insulator with gas injected in it to reduce signal loss.
- **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 Aluminium-Magnesium alloy.
- **Packing:** Available in 100 meter packed in carton and 305 meter packed in easy pull box. Higher lengths available on special request.

Technical Specification Of RG6 Coaxial Cable (Jelly Filled)		
Properties	Unit	Specification
Construction Parameters		
Conductor Material	---	Solid bare copper / CCS
Nominal Diameter	mm	1.02 ± 0.01
Insulation Material	---	Foam PE
Nominal Diameter of Foam	mm	4.57 ± 0.1
Centricity	%	≥ 85
Shield Material	---	Bonded Aluminium Foil
Braiding Material	---	Aluminium - Magnesium Alloy
Braiding Coverage	---	16*6*0.12mm (63%)
Jacket Material	---	PVC
Nominal Diameter of PVC Jacket	mm	7.0 ± 0.1
Colour	---	Black
Electrical Parameters		
Nominal Impedance	Ω	75±3
Nominal Velocity of Propagation	%	85
Nominal Capacitance	pF/meter	50
Insulation Resistance	MΩ/km	≥100000
Structural Return Loss (5 to 300 MHz)	dB	20
Structural Return Loss (300 to 1000 MHz)	dB	18
Performance		
Frequency MHz		Attenuation @ 68°F (20°C)
55	dB/100 m (Max)	5.25
187	dB/100 m (Max)	9.35
300	dB/100 m (Max)	11.64
450	dB/100 m (Max)	14.43
600	dB/100 m (Max)	16.83
750	dB/100 m (Max)	18.6
865	dB/100 m (Max)	20.1
1000	dB/100 m (Max)	21.6

TELEPHONE CABLES

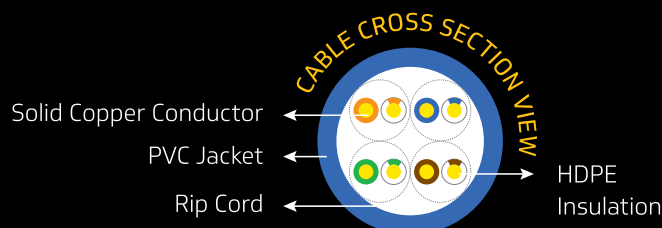
V-Guard twisted paired cables are best suited for telephone and switchboard cabling applications. The cables can be used for switchboard and internal telephone wiring in apartments, high-rise buildings, offices, factories, hotels, residential complexes, etc. The most common sizes are 2 pair, 3 pair, 4 pair and 5 pair in conductor of 0.4 mm or 0.5 mm.

SALIENT FEATURES

- Low Power Loss.
- Low Crosstalk.
- Fire Retardant Sheath.
- Low Attenuation.

RANGE OF PRODUCT

- 1 pair to 20 pair (0.4 mm/0.5 mm)



TECHNICAL DETAILS

- Conductor: The central conductor is made of bare annealed solid electrolytic grade of copper.
- Insulation: Premium quality HDPE is used. This serves for low attenuation and minimized cross talk.
- Twisted Pairs: The cores are carefully twisted with suitable lays and bunched together.
- Packing: Available in 90 meter and 500 meter. Higher lengths available on special request.

Sl. No	Technical Parameters	Requirements				
A	Physical Parameter					
1	Construction	1 Pair	2 Pair	3 Pair	4 Pair	5 Pair
2	Conductor Material: 0.4 mm diameter (nominal) & 0.5 mm diameter (nominal)	Solid Annealed Bare Copper of Conductivity & Purity				
3	Insulation Material (0.4 & 0.5 mm diameter)	High Density Polyethylene				
4a	Insulation Thickness (Average) for 0.4 mm diameter	0.17 mm	0.17 mm	0.17 mm	0.17 mm	0.17 mm
4b	Insulation Thickness (Average) for 0.5 mm diameter	0.20 mm	0.20 mm	0.20 mm	0.20 mm	0.20 mm
5a	Diameter of Insulated Conductor for 0.4 mm diameter	0.74 mm	0.74 mm	0.74 mm	0.74 mm	0.74 mm
5b	Diameter of Insulated Conductor for 0.5 mm diameter	0.92 mm	0.92 mm	0.92 mm	0.92 mm	0.92 mm
6	Rip cord (0.4 & 0.5 mm diameter)	Nylon				
7	Colour Combination	White-Blue/ Blue				
		-	White-Orange/ Orange			
		-	-	White-Green/ Green		
		-	-	-	White-Brown/ Brown	
		-	-	-	-	White-Grey/ Grey
8	PVC Jacket (0.4 mm diameter & 0.5 mm diameter)	FRPVC compound with high oxygen index (LOI = 29%)*				
9a	PVC Thickness Minimum (for 0.4 mm)	0.32	0.32	0.32	0.32	0.32
9b	PVC Thickness Minimum (for 0.5 mm)	0.32	0.32	0.32	0.62	0.62
10a	Approximate Outer Diameter (for 0.4 mm)	2.40	2.73	3.20	3.55	4.00
10b	Approximate Outer Diameter (for 0.5 mm)	2.74	3.15	3.71	4.90	5.43
11	Packing Length (meters)	Available in 90 meter and 500 meter				
B	Electrical Parameters					
1	Conductor Resistance (maximum) ohm/km at 20°C	143 Ω / km for 0.4 mm diameter & 92.2 Ω / km for 0.5 mm diameter				
2	Mutual Capacitance (maximum) Nano Farads/km	50	50	50	50	50
3	Insulation Resistance in Air (minimum) Meg-ohms/km	10000	10000	10000	10000	10000
4	Capacitance Unbalance Pair to Pair (maximum) Pico Farad / km	250	250	250	250	250

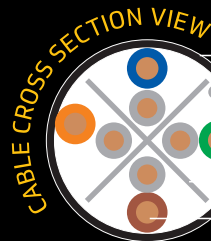
LAN CABLE



V-Guard LAN Cables enable data transfer without transmission loss or theft. These technologically advanced cables are compatible with the most superior networking switch gears and provide express-speed performance of up to 250 MHz. Its unique zero interference feature assures that no signal loss is experienced during data transfer process.

SALIENT FEATURES

- Min. radiation and max. noise immunity.
- Excellent electromagnetic compatibility.
- High speed data access.
- Prevent cross talking.



Cable Sheath
Ripcord
Insulation
Separator
Conductor

TECHNICAL DETAILS

- Conductor: Solid bare copper.
- Insulation: High density polyethylene.
- Pair: 2 Insulated conductors twisted together with unique lay.
- Outer Jacket: FR PVC.
- Outer Jacket colours - Yellow or as per customer requirement.
- Packing: Available in 305 meter packed in easy pull box.

TECHNICAL SPECIFICATION OF UTP CAT6 (23AWG) 4 Pair		
Description	Unit	Size / Specification
CONDUCTOR		
Conductor Material	---	23 AWG Solid Annealed Bare Copper
Conductor dia	mm	0.55 ± 0.01
INSULATION		
a) Composition of insulation	---	High Density Polyethylene
b) Nominal diameter for insulation	mm	0.98 ± 0.02
c) Nominal Thickness for insulation	mm	0.24
LAID UP		
Rip Cord Material	---	3 Ply Nylon
Colour Codes	---	Brown / Brown-White Green / Green -White Blue / Blue-White Orange / Orange-White
SHEATH		
a) Composition of Sheath	-	FRPVC compound with high oxygen index (LOI > 29%)*
b) Hardness of Sheath	Shore A	86 - 88
c) Nominal Thickness for sheath	mm	0.7
d) Nominal Diameter for sheath	mm	6.0 ± 0.2
ELECTRICAL CHARACTERISTICS		
Mutual Capacitance	nF/100m	< 5.6
Nominal Impedance	Ω	100±15
Nominal Velocity of Propagation	%	> 65 @ 250 MHz
Conductor Resistance	Ω/km	< 78.3
Resistance Unbalance	%	< 2
Capacitance Unbalance	pF/100m	330
Propagation Delay	nS/100m	< 546 @ 20° C
Delay Skew	nS/100m	< 45 @ 20° C
Return loss test @ 250 MHz	---	TIA/EIA 568 C
Attenuation test @ 250 MHz	---	TIA/EIA 568 C
Temperature Range	°C	Up to 70°

CCTV CABLE

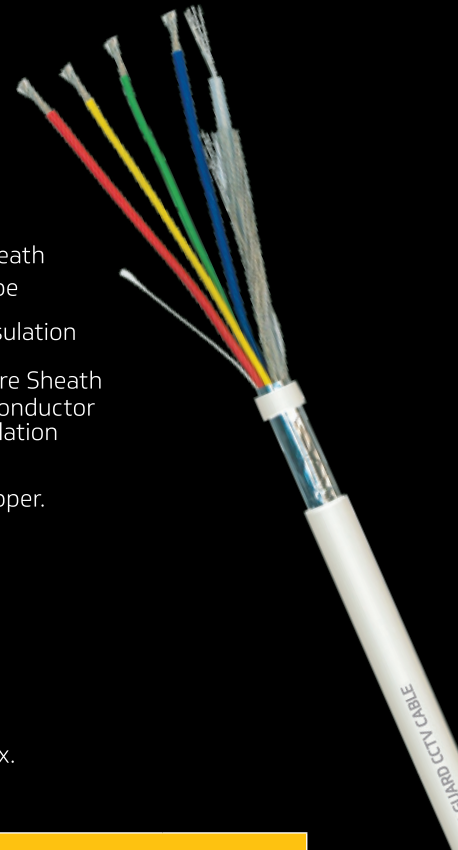
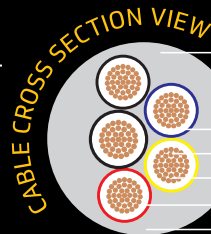
V-Guard offers specially designed cables for CCTV Camera cable for high quality video transmission. These cables are designed to transmit the complete video frequency range with minimum distortion or attenuation. They offer reliable security by withstanding over-heating, seepage, weather changes and rodent attacks.

SALIENT FEATURES

- Minimum distortion of video frequency range.
- Clear picture even on low frequency.

TECHNICAL DETAILS

- Screened Core for Video signal.
- Conductor: The central conductor is made of fine wires tin coated electrolytic grade copper.
- Insulation: The insulation provided over the conductor is of HDPE with high dielectric strength and low capacitance.
- Screen: Annealed tin coated copper 85% coverage approx.
- Sheath: Black coloured PVC Power Cores.
- Separator: PETP tape
- Sheath: PVC
- Cable Colour: White
- Packing : Available in 100 meter packed in carton and 305 meter packed in easy pull box.



Technical Specification of CCTV Cables					
Construction Parameters					
Co-axial Cable Section			Power Cable Section		
Inner Conductor			Number of Cores	3+1	4+1
Material	Annealed Tinned Copper		Conductor	7x0.20 Annealed Tinned Copper	
Diameter in mm (Nominal)	9x0.20		Insulation	Type A PVC conforming to IS:5831	
Dielectric Insulation			Diameter in mm (Nominal)	1.47	
Material	PE		Colour Codes	Red, Yellow, Blue	Red, Yellow, Blue, Black
Diameter in mm (Nominal)	1.50				
Shield			Jacket		
Material	48/0.12 TC		Material	ST 1 PVC conforming to IS:5831	
Jacket			Colour	White	
Material	PVC Black		Diameter in mm	6.50	7.00
Diameter in mm (Nominal)	3.00				
Electrical Specifications					
Nominal DC Resistance at 20° C (Ohm)	3.55		Performance		
Mutual Capacitance (pF/m)	53		Frequency in MHz	Max. Attenuation (db/100m) at 20° C	
Characteristics Impedance (Ohm)	75		55	6.73	
			187	11.81	
Structural Return Loss	Min 15 dB @ 1 - 1000 MHz		300	14.60	
			550	19.52	
			750	22.87	
Nominal Velocity Ratio (%)	85		865	24.67	
			1000	26.64	

CERTIFICATIONS & ACCREDITATIONS

CERTIFIED BY



Bureau Veritas Certification

V-GUARD INDUSTRIES LIMITED
WIRES & CABLES DIVISION



Standards

ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

SITE	ADDRESS	SCOPE
HEAD OFFICE (SITE - 1)	WIRES & CABLES DIVISION K. G. CHAVADI, PALAKKAD MAIN ROAD, COIMBATORE - 641 105, TAMIL NADU, INDIA.	MANUFACTURE OF PVC INSULATED - PVC SHEATHED & UNSHEATHED CABLES. MANUFACTURE OF PVC COMPOUNDS.
KASHIPUR (SITE - 2)	WIRES & CABLES DIVISION 6 TH K M STONE, MORADABAD ROAD, KHASARA NO. 85, VILLAGE BASAI, KASHIPUR - 244 713, UTTARAKHAND, INDIA.	MANUFACTURE OF PVC INSULATED CABLES

Certificate No. IND.21.7920/IM/U Version: 1 Revision date: 28 May 2021

Signed on behalf of BVCH SAS - UK Branch
Jagdish N. MANIAN
Head - CERTIFICATION, South Asia
Commodities, Industry & Facilities Division

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Local office: Bureau Veritas (India) Private Limited (Certification Business)
72 Business Park, Marol Industrial Area, MIDC Cross Road "C",
Andheri (East), Mumbai - 400 093, India.

Further clarifications regarding the scope of this certificate and the applicability of the
management system requirements may be obtained by consulting the organization.
To check the certificate validity please call +91 22 6274 2000.

Fig. 2 of 2

CERTIFIED BY



TESTED AT



ACCREDITATION



**International Copper
Association India**
Copper Alliance

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