



WIRES YOU CAN TRUST, QUALITY YOU CAN COUNT ON

STRONG WIRES. STRONGER BONDS.





NABL

Natraj Industries has set a benchmark in product quality by achieving NABL (National Accreditation Board for Testing and Calibration Laboratories) accreditation, showcasing its capability to conduct international-level quality evaluations for wires and cables. Additionally, the company has a DSIR-recognized technology center within its cable division, reinforcing its commitment to innovation and excellence. NABL, an autonomous body under the Department of Science and Industrial Research (Government of India), oversees this accreditation.

As the first private facility of its kind in India, the NABL-accredited laboratory is fully equipped to meet international standards for testing a wide range of cables, up to 220 KV grade, PVC cables, flexible cables and fire survival cables. The lab adheres to Indian Standards. It also conducts eight types of fire tests to evaluate and demonstrate the fire-retardant behavior of cables.



ABOUT THE COMPANY

NATRAJ INDUSTRIES

Natraj Industries, a distinguished name in the cable manufacturing industry, is one of the oldest and most renowned manufacturers of electric wires, coaxial cables, submersible cables, XLPE insulated cables, and flexible cables in India.

Established in 1978 by its visionary founder, Shri Sudhir Kumar, the company has grown from humble beginnings to become a leader in its field. Shri Kumar's foresight, unwavering determination, and dedication, combined with the expertise of his professional team, state-of-the-art infrastructure, robust marketing network, and a commitment to customer satisfaction, have been the driving forces behind Natraj Industries' success. His focus on delivering consistent quality and economical solutions has elevated the business to remarkable heights.

As Natraj Industries approaches its Golden Jubilee, completing 47 illustrious years in the industry, it takes immense pride in having illuminated countless homes and establishments across the nation.

The company's flagship brands, Magdolin and Polostar, have become synonymous with quality and reliability, earning the trust and confidence of customers nationwide. Through its commitment to excellence, Natraj Industries continues to contribute significantly to India's growth and development.



HOUSE WIRES

Natraj Industries offers high-quality house wires designed to ensure safe, efficient, and long-lasting electrical connections for residential and commercial spaces. Manufactured using premium-grade copper and advanced insulation technology, our house wires deliver consistent performance and enhanced safety for modern electrical needs.

Built to withstand voltage fluctuations, heat, and daily wear, Natraj house wires provide reliable power transmission while minimizing energy loss. Each wire undergoes strict quality checks to meet industry standards, making them a trusted choice for electricians, builders, and homeowners alike.

With a focus on durability and safety, Natraj Industries ensures that every home is powered with confidence, protection, and performance.

Key Features & Benefits

- 🗡️ High-Conductivity Copper for efficient power flow
- 🛡️ Superior PVC Insulation for maximum safety and durability
- 🔥 Heat & Flame Resistant to prevent electrical hazards
- ⚡ Low Power Loss ensuring energy efficiency
- 🏠 Ideal for Residential & Commercial Use
- ✅ ISI-Compliant & Quality Tested
- 📦 Easy to Install & Long-Lasting Performance



SINGLE CORE FR PVC INSULATED COPPER CONDUCTOR (UNSHEATHED) FLEXIBLE CABLES, 1100 VOLT

Nominal cross-sectional area of conductor	Number/ Maximum Diameter of conductor of strands	Nominal Thickness of Insulation	Approx. overall Diameter	Current carrying capacity 2 cables single Phase		Maximum Conductor Resistance per kilometer 20 C
				Conduit/ Trunking	Unenclosed clipped directly to a surface or on cable trays	
(Sq.mm)	(mm)	(mm)	(mm)	A	A	(Ω Ohm)
0.5 sq. mm	16 N/0.2 mm	0.6mm	2.1mm	5 A	5 A	39.00 Ω (Ohm)
0.75 sq. mm	24 N/0.2 mm	0.6mm	2.3mm	9 A	9 A	26.00 Ω (Ohm)
1.0 sq. mm**	14 N/0.3 mm	0.7mm	2.7mm	15 A	16 A	18.10 Ω (Ohm)
1.5 sq. mm**	22 N/0.3 mm	0.7mm	3.0mm	19 A	21A	12.10 Ω (Ohm)
2.5 sq. mm**	36 N/0.3 mm	0.8mm	3.6mm	25 A	28 A	7.41 Ω (Ohm)
4.0 sq. mm	56 N/0.3 mm	0.8mm	4.1mm	32 A	35 A	4.95 Ω (Ohm)
6.0 sq. mm	84 N/0.3 mm	0.8mm	4.6mm	43 A	47 A	3.3 Ω (Ohm)

NOTE: AVAILABLE IN 90 METER LENGTH IN CARTON PACKAGING

...Fill the colour code i.e. B = Blue ... / K = Black ... etc...

**Conductor Shall be class-II for 1.0 sq. mm, 1.5 sq. mm & 2.5 sq. mm & for other sizes shall be of class V as per IS 8130.

*The number and diameter of conductor strands are for reference only. Conductor resistance as per IS 8130 is the governing criteria.

CONSTRUCTION:

Conductor: Plain annealed copper conductor as per IS 8130

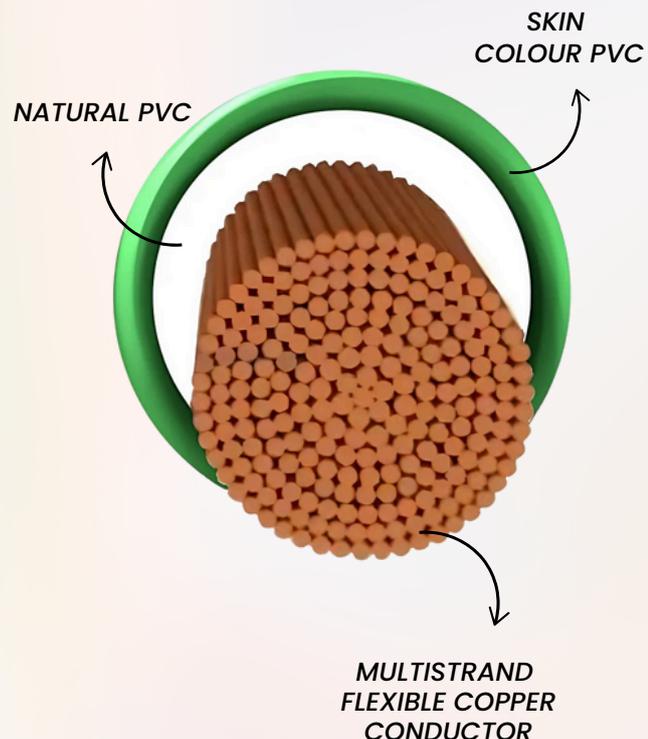
Insulation: Primary - Natural FR PVC

Secondary: Skin colour coated FR PVC

Colour: Red/Yellow/Blue/Black/Green.

(Any other colour on specific request can also be supplied)

NOTE: PROJECT PACKING IN 180 METER IS ALSO AVAILABLE



SINGLE CORE FR PVC INSULATED COPPER CONDUCTOR (UNSHEATHED) FLEXIBLE CABLES, 1100 VOLT

Nominal Cross Sectional area of conductor	Number/Maximum diameter of conductor strands	Nominal thickness of Insulation	Approx. overall diameter	Current carrying capacity 2 cables single phase	Maximum conductor resistance per km at 20 C
				Unenclosed clipped directly to a surface or on cable trays	
(Sq.mm)	(mm)	(mm)	(mm)	A	(Ω ohm)
10 sq mm	80 N/0.4 mm	1.0 mm	6.1 mm	59 A	1.91 Ω Ohm
16 sq. mm	126 N/ 0.4 mm	1.0 mm	7.0 mm	79 A	1.21 Ω Ohm
25 sq mm	196 N/ 0.4 mm	1.2 mm	8.6mm	93 A	0.780 Ω Ohm
35 sq mm	276 N/ 0.4 mm	1.2 mm	9.7mm	113 A	0.554 Ω Ohm
50 sq mm	396 N/ 0.4 mm	1.4 mm	11.5mm	153 A	0.386 Ω Ohm
70 sq mm	360 N/0.5 mm	1.4 mm	13.0mm	238 A	0.272 Ω Ohm
95 sq mm	475 N/ 0.5 mm	1.6 mm	15.1mm	289 A	0.206 Ω Ohm
120 sq mm	608 N/ 0.5 mm	1.6mm	16.6mm	339 A	0.161 Ω Ohm
150 sq mm	750 N/ 0.5 mm	1.8mm	18.5mm	394 A	0.129 Ω Ohm
185 sq mm	925 N/ 0.5 mm	2.0mm	20.4mm	461 A	0.106 Ω Ohm

**NOTE: CONDUCTOR AS PER CLASS V OF IS 8130 CONFIRMING TO IS 694
100 METER IN POLYWRAP PACKING & IN BIGGER PACKING ON REQUEST**

...Fill the colour code i.e. B = Blue ... B ... / K = Black ...K... etc...

*The number and diameter of conductor strands are for reference only. Conductor resistance as per IS 8130 is the governing criteria. Progressive sequential length marking on every meter.

CONSTRUCTION:

Conductor : Plain annealed copper conductor as per IS 8130

Insulation : Primary - Natural FR PVC

Secondary : Skin Colour Coated FR PVC

(Any other colour on specific request can also be supplied)

NOTE :

- 70 sq. mm and above are available in wooden drums.
- Colour : Red/Yellow/Blue/Black/Green.
- Single core PVC insulated Stranded Copper Conductor available on request.
- FRLSH and ZHFR is also available on request.



Specifications given here are subject to change to satisfy requirements. The number of wires is approximate and wire diameter is nominal; they shall be such as to satisfy the requirements of conductor resistance.



FR-LSH (Flame Retardant Low Smoke and Halogen)

FRLSH cables were designed with safety in mind, especially for commercial buildings with limited exits and ventilation, like cinema halls. In the unfortunate event of a fire, many people suffer due to suffocation and low visibility caused by thick black smoke and toxic gases released when regular PVC burns. To address this, FRLSH insulation was developed to significantly reduce smoke and harmful gas emissions, making such environments much safer.



Why It Matters for Safety

FR-LSH cables are made with a special insulation formula that limits the release of toxic gases and smoke, helping protect people from serious health risks during a fire.



Higher Resistance to Fire

One of the key benefits of FRLSH insulation is its high oxygen index of 30%. This means it will only catch fire if the oxygen level in the air is above 30%—but in reality, atmospheric oxygen is only about 21%. This makes FRLSH cables highly resistant to ignition and safer in fire-prone situations.



Stops Fire from Spreading

FR-LSH cables have a built-in self-extinguishing property, meaning they won't allow flames to spread. This helps control fires more effectively, reducing damage and increasing the chances of safe evacuation. In short, FRLSH cables provide an extra layer of protection in buildings where fire safety is critical, ensuring lower smoke, fewer toxic emissions, and reduced fire hazards.

SINGLE CORE FR-LSH PVC INSULATED COPPER CONDUCTOR (UNSHEATHED) FLEXIBLE CABLES, 1100 VOLT

Nominal cross-sectional area of conductor	Number/ Maximum Diameter of conductor of strands*	Nominal Thickness of Insulation	Approx. overall Diameter	Current carrying capacity 2 cables single Phase		Maximum Conductor Resistance per kilometer 20 C
				Conduit/ Trunking	Unenclosed clipped directly to a surface or on cable trays	
(Sq.mm)	(mm)	(mm)	(mm)	A	A	(Ω ohm)
1.0 sq. mm**	14 N/0.3 mm	0.7mm	2.7mm	13 A	15 A	18.10 Ω (Ohm)
1.5 sq. mm**	22 N/0.3 mm	0.7mm	3.0mm	17 A	19 A	12.10 Ω (Ohm)
2.5 sq. mm**	36 N/0.3mm	0.8mm	3.6mm	23 A	26 A	7.41 Ω (Ohm)
4.0 sq. mm	56 N/0.3mm	0.8mm	4.1mm	29 A	32 A	4.95 Ω (Ohm)
6.0 sq. mm	84 N/0.3mm	0.8mm	4.6mm	39 A	43 A	3.30 Ω (Ohm)

CONSTRUCTION :

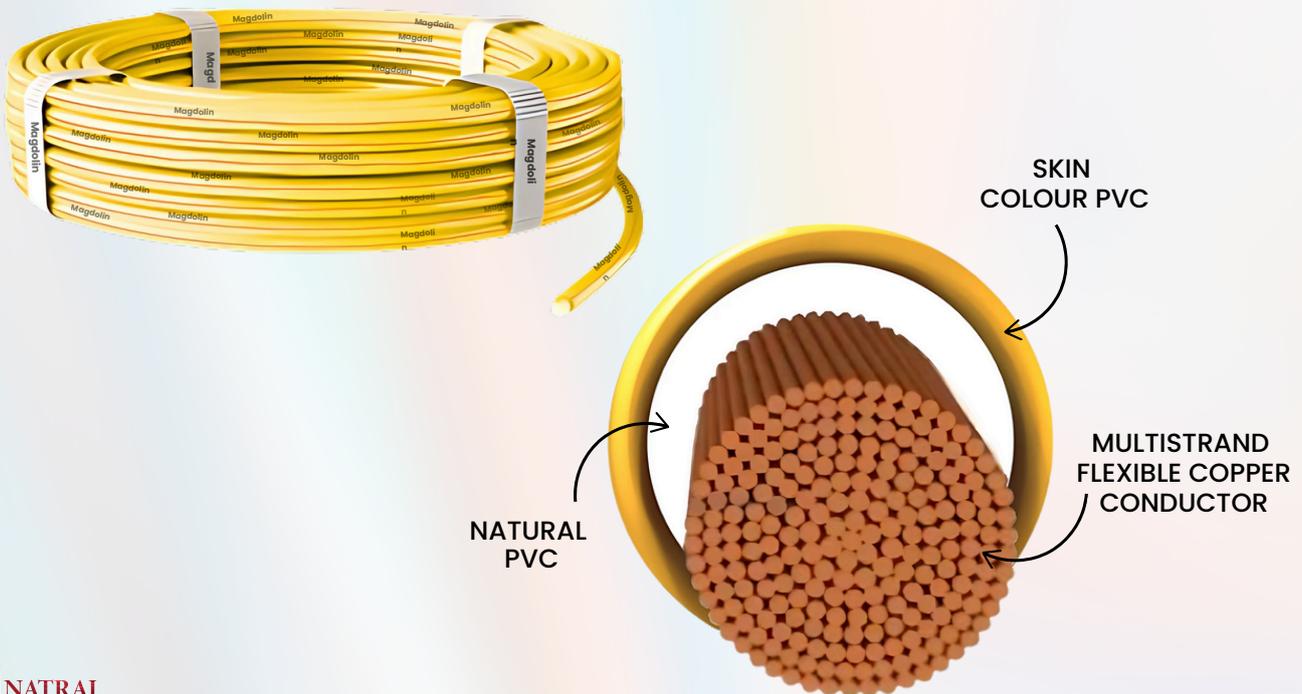
Conductor : Plain annealed copper conductor as per IS 8130

Insulation : FR-LSH PVC

Colour : Red/Yellow/Blue/Black/Green

(Any other colour on specific request can also be supplied)

NOTE: PROJECT PACKING IN 180 METER IS ALSO AVAILABLE.



ZHFR (Zero Halogen Flame Retardant)

A result of extensive R&D at Natraj Industries, this innovative compound is nearly halogen-free and boasts an exceptionally high oxygen index (>31%). Natraj cables are manufactured in compliance with IS 17048 standards.

ZHFR insulation has been specifically designed to enhance fire safety while offering superior flexibility and improved mechanical strength across the entire cable range.

The insulation and sheath of ZHFR cables are made from specialized materials, either thermoplastic or cross-linked ZHFR, capable of operating within a temperature range of -15°C to 90°C. These cables provide enhanced ozone resistance, reduced hot deformation, and improved electrical properties. Additionally, ZHFR insulation is designed to prevent the release of toxic fumes and smoke during combustion, ensuring better visibility with a light transmission rate of over 70%—significantly higher than standard PVC cables.

NON-TOXIC

Studies indicate that the majority of fire-related casualties occur due to suffocation caused by the release of hazardous gases. PVC Flame Retardant Low Smoke and Halogen (FRLSH) cables emit significantly fewer toxic gases compared to standard PVC cables. In the event of a fire, FRLSH cables produce less than 60% smoke and release less than 20% halogen content. Our Zero Halogen Flame Retardant (ZHFR) cables are virtually halogen-free and offer 10 times better performance than FRLSH cables, with hazardous gas emissions reduced to less than 0.5%. This greatly improves air quality during a fire, enhancing the chances of survival and rescue for those trapped.





ZHFR insulated industrial cables are practically halogen-free, ZHFR Wire protecting not only you and your family, but also the future generations against the Green House Effect.



Application

Our Cables insulated and sheathed with halogen free flame-retardant thermoplastic or cross-linked halogen free flame retardant thermosetting compound confirming to IS 17048 is suitable to use in electric power and lighting for indoor use in AC single phase or three phase (earthed or unearthed) systems with rated voltage up to and including 1100 V. This cable is also suitable for DC systems with rated voltage up to and including 1500 V to earth.

SINGLE CORE ZHFR POLYMER INSULATED COPPER CONDUCTOR (UNSHEATHED) FLEXIBLE CABLES, 1100 VOLT

Nominal cross-sectional area of conductor	Number/ Maximum Diameter of conductor of strands*	Nominal Thickness of Insulation	Approx. overall Diameter	Current carrying capacity 2 cables single Phase		Maximum Conductor Resistance per kilometer 20 C
				Conduit/ Trunking	Unenclosed clipped directly to a surface or on cable trays	
(Sq.mm)	(mm)	(mm)	(mm)	A	A	(Ω ohm)
1.0 sq. mm**	14 N/0.3 mm	0.7mm	2.7mm	15 A	16 A	18.10 Ω (Ohm)
1.5 sq. mm**	22 N/0.3 mm	0.7mm	3.0mm	19 A	21 A	12.10 Ω (Ohm)
2.5 sq. mm**	36 N/0.3mm	0.8mm	3.6mm	25 A	28 A	7.41 Ω (Ohm)
4.0 sq. mm	56 N/0.3mm	0.8mm	4.1mm	32 A	35 A	4.95 Ω (Ohm)
6.0 sq. mm	84 N/0.3mm	0.8mm	4.6mm	43 A	47 A	3.30 Ω (Ohm)

NOTE: PROJECT PACKING IN 180 METER IS ALSO AVAILABLE.

CONSTRUCTION:

Conductor: Plain annealed copper conductor as per IS 8130

Insulation: ZHFR PVC

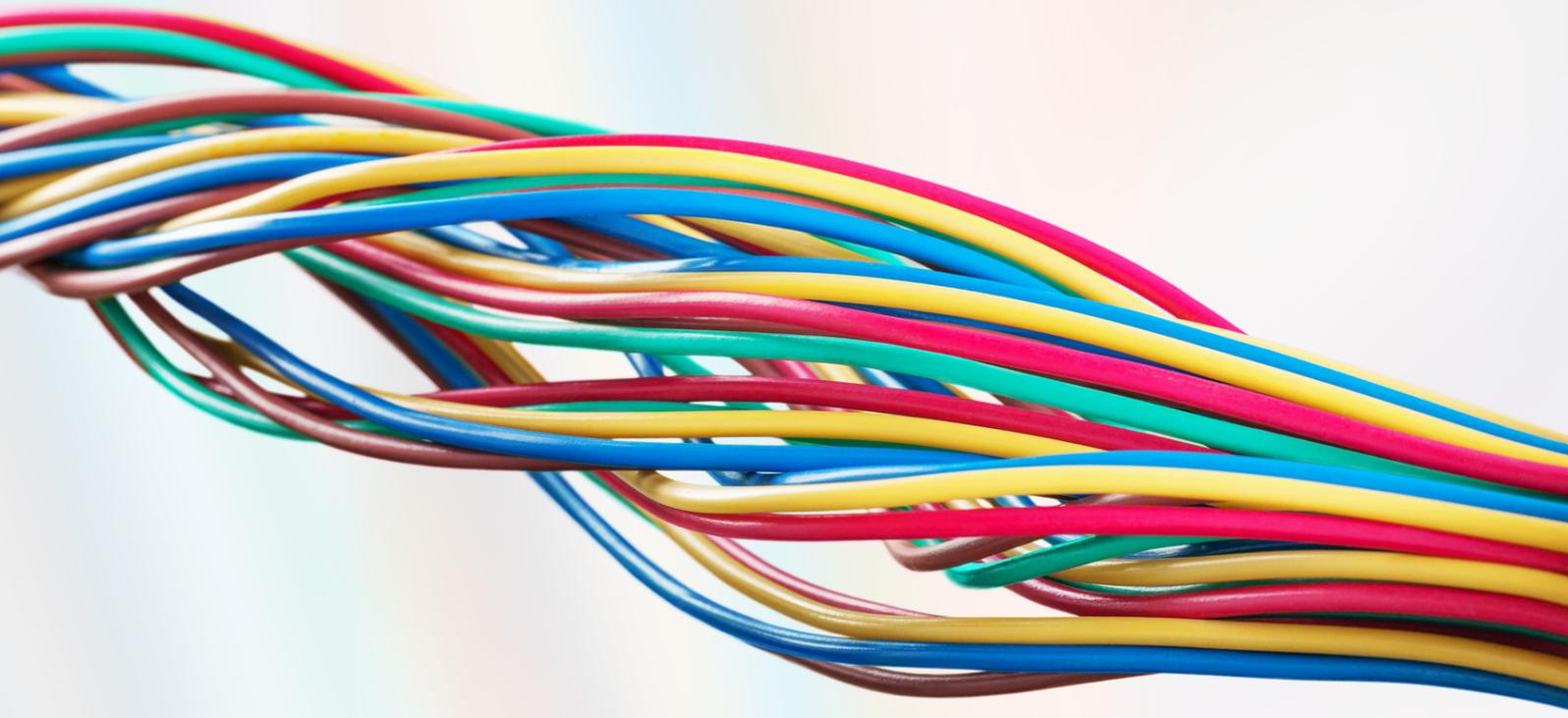
Colour: Red/Yellow/Blue/Black/Green

(Any other colour on specific request can also be supplied)





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