FLEXI TOUGH

No PVC, No Smoke, No Fire

eB-HFFR

Electron Beam Crosslinked Wires & Cables

V-MARC

INDIA

Powering Progress Sustainably

Empowering India with Revolutionary

Flexi Tough eB-HFFR Wires

&

eB^{+} Power Cables

NO **PVC**
NO **SMOKE**
NO **FIRE**

Green Initiative By V-MARC India Limited

ABOUT COMPANY

V-Marc India stands as a beacon of trust and excellence in electrical manufacturing industries, a distinguished Public Limited company renowned for its commitment to innovation and quality.

Established in 2006, V-Marc India is embarking on significant Mega Expansion with a new state-of-the-art manufacturing unit in our dev bhoomi home state Uttarakhand.

Our commitment to excellence was recognized in 2016 when we were awarded the MSME Unit of the Year by the National Productivity Council under Make in India. Looking ahead with robust extended capabilities, our new unit sets milestone with the production of higher voltage cables up to 33kV.

At V-Marc India, customer satisfaction is the foundation stone of our strategic Vision & Mission. We continue to embark on the future with a commitment to high-quality products and a customer-centric approach.

Our manufacturing unit is well equipped with modern plant & machinery and have complete testing equipments backed up with well qualified and trained personnel, quality systems with 1SO 9001:2015, ISO 14001:2015, ISO 45001:2018 & ISO 27001:2022 accreditation with strong supply line of suppliers i.e. NALCO, BALCO, HINDALCO, Dow, Borouge, KLJ Ltd., KALPENA Ltd., Quality is our main objective for all activities at "V-MARC India" Brand. We adopt stringent control right from the raw material stage up to finished cable with process control during the manufacturing stage. Besides this, we hold BIS license for IS:694:2010, IS:17048:2018 IS:1554 (Part-1)/1988, IS-7098 (PART 1-1988), IS:14255/1995. IS:7098 (Pt-2 &3) IS-398 (Pt-2:1996)

Flexi Tough Electron Beam Cross-Linked

Single and Multicore Flexible Cables

Conductor: The conductors drawn from 99.97 % bright electrolytic grade Copper- Class- 2/5 with more than 100% conductivity. Annealed plain copper wires are bunched together to get uniformity of resistance and flexibility as per reference standards.

Insulation: The bunch conductors are insulated with specially formulated eBeam XL Halogen Free flame-retardant compound with a high insulation resistance value. These cables are insulated with specially formulated & in-house manufactured HFFR compound by incorporating eB technology that enhances electrical, thermal, fire and mechanical property of wire & cables.

Sheath: HFFR EBXL (for multicore cable)

Products Range :

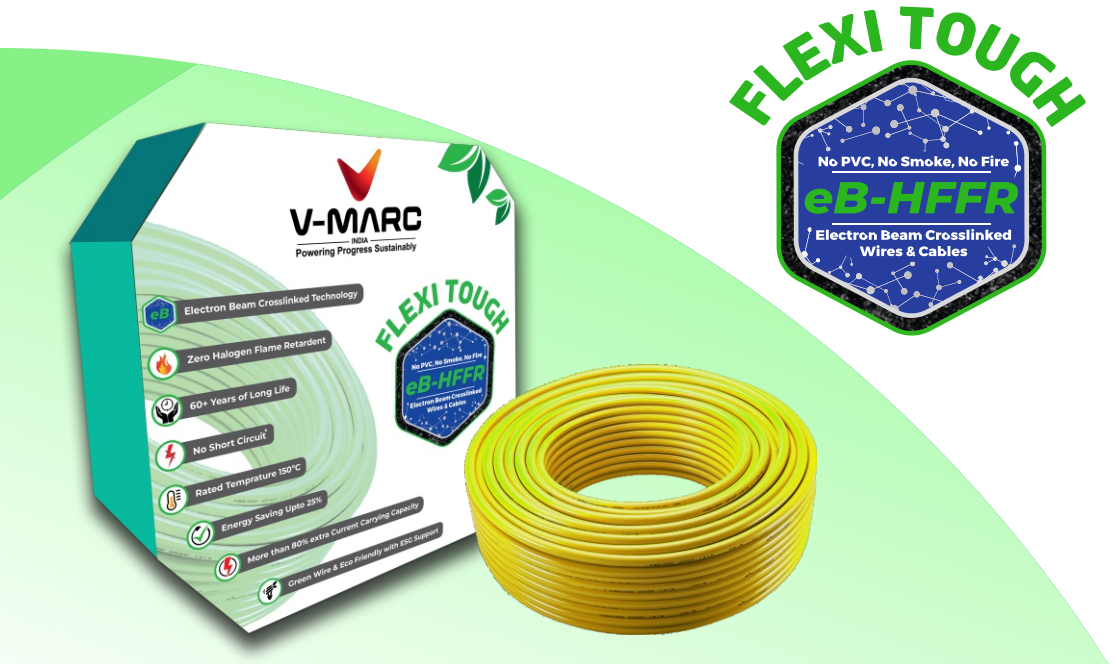
- Single Core -- Up to 300 sq mm
- 2/3/4 Core -- Up to 50 sq mm

Operating Temperature Range : Up to Max. 150°C

Colour:

Single Core -- Red, Yellow, Blue, Black, Green, Gray, White (Other Colours available on Request)

Multicore – Black

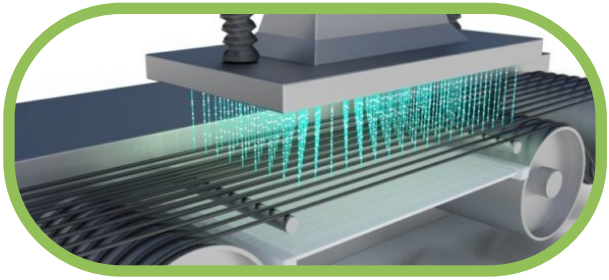


Technical Comparison chart

S. No.	Traditional Wire	Flexi-Tough Wire
1	Conductor Operating Temp. 70°C(Max)	Conductor Operating Temp. 150°C (Max.)
2	Short circuit temperature 160°C	Short circuit temperature 325°C
3	Hot Set – Not Available	Hot Set Property at 200°C = 50% (Max)
4	Smoke Emission (Light Transmission) 40%	Smoke Emission (Light Transmission) 95%
5	Smoke Density 60%	Smoke Density 5%
6	HCl 20% Maximum	HCL 0%
7	Oxygen Index 29% Minimum	Oxygen Index 32.5 % Minimum

Features : Flexi Tough eB-HFFR Wires

- Flexi Tough wires has more than 80% extra current carrying capacity in comparison to the conventional Wires besides Improving the Cable Life More than Double.
- These Wires are Insulated with a Special Grade E-Beam XL HFFR Compound. The Insulation is Far Superior in Terms of Critical Oxygen and Temperature Index in comparison to the other PVC compound.
- Flexi Tough HFFR wires provide superior fire resistance.
- Flexi Tough wire will not produce smoke during contact with flame .
- Flexi Tough wire do not release poisonous gases.
- Higher Thermal ageing up to 150℃ .
- Longer operating Life Span of more than 60 years.
- Flexi Tough wire are environmentally friendly and non-toxic.



Solar DC Cable

Construction:

Conductor: Electrolytic annealed Flexible tinned Copper conductor IEC 60228, Class 5 / IS: 8130

Insulation/sheath: (XLPO) electron beam cross linked halogen free flame retardant compound.

Products Range : up to 240 sqmm

Material Properties Like fire performance, Smoke emission, Halogen emission, Toxicity Ozone Resistant, Weathering Resistance are as per reference Indian / International Standards.

Features

- Electron Beam Cross Linked
- Better UV & ozone resistance and improved weather resistance in adverse conditions
- Improved oil, chemical resistance & improved crack resistance
- Improved Mechanical properties of the cables in elevated temperature conditions
- Better ageing resistance
- Halogen Free, Flame Retardant, Fire Retardant, Low Smoke Emission
- Max. Temp. at Conductor : 150˚C (20,000h)
- Test Voltage : 6500V AC for 5 minutes
- Short Circuit Temp : 325°C.
- RoHS compliant
- Flexibilty & Stripability: for fast and easy installation

eB+ Power Cables

Product Construction:

Conductor: Aluminium conductor complying with IS: 8130
Insulation: eBeam Cross linked insulated materials 125°C
Inner sheath: PVC
Armouring: Galvanized GI Strip/Wire
Outer sheath: PVC ST-2 / HFFR EBXL

Technical Data:

Operating Temperature: -15°C to 125°C
Short Circuit Temperature: 300°C
Bending radius (min): 12 x Cable Dia
Rated Voltage : 1.1 KV
Test Voltage: 3.0 kV for 5 mins.
Specification: IS:7098 Part-1

Advantages Of e-Beam Cross-Linking Over Conventional Curing System

S. NO	Parameters	Chemical Curing	e-Beam Cross Linking
1	Cross-Linking Bond	C – S x -C or C – O x -C	C - C
2	Continuous Operating Temperature	90°C	125°C
3	Estimated Life of Cable	20-25 Years	40 Years
4	Variation in Mechanical Parameters after Ageing at 135°C / 7 Days.	-25%	-5%
5	Volume Resistivity at Room Temperature	1 x 10^{14} Ohm-cm	1 x 10^{15} Ohm-cm
6	Current Carrying Capacity (For a cable of size 25 Sqmm)	123 amp	160 amp
7	Effect on High Overload Current	Burned	Not Burned
8	Cold Bend Test	-15°C	-25°C
9	Flammability Test IEC 60332-Part 3	Cat. - C	Cat. - A
10	Blooming Effects	Chances to bloom to Outer Layer Leading to surface deterioration.	No Effect.
11	Polymer Degradation during cross-linking	Yes As cross-linking occurs at higher temperature (90°C - 150°C)	No As EB Cross Linking occurs at room temperature
12	Oxidative degradation	Yes	No

Features: eB+ Power Cables

- eBeam Cross Linked
- The electron beam Cross Linked “Wires and Cables” enhances Mechanical, Electrical, Thermal, Chemical & Weathering properties
- Higher temperature withstand capability
- High current carrying capacity is more than 30% in comparison to the traditional cables
- Also prevents fires due to overload short circuits and thus saves precious lives and property
- High Insulation resistance at elevated temperature
- Soldering iron resistant
- Resistance to corona effect
- Better resistance to most chemicals & acids
- Low direct electric losses
- Reduces Leakage current

PRESTIGIOUS CLIENTS

पावरग्रिड · PWD · सेल SAIL · BSNL Connecting India Faster · भारतीय रेल INDIAN RAILWAYS · कोल इंडिया Coal India

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BHEL · IndianOil · NTPC · IRCON · HPGCL · HAL Hindustan Aeronautics Limited

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INDIA

Powering Progress Sustainably

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