

eB+ Power Cables

Product Construction:

- Conductor:** Aluminium conductor complying with IS: 8130 : 2013
- Insulation:** Cross-linked e-Beam XLPE compound .
- Inner sheath:** PVC / as per Customer Specification.
- Armouring:** Galvanized GI Strip / Wire
- Outer sheath:** PVC ST-2 / HFFR EBXL / as per Customer Specification

Technical Data:

- Operating Temperature:** -15°C to 125°C
- Short Circuit Temperature:** 250°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

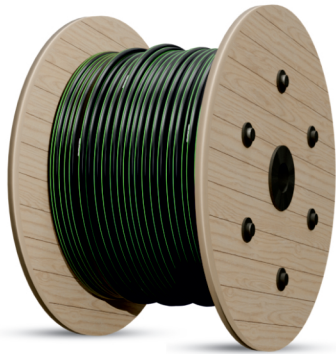


Advantages of e-Beam Cross-Linked XLPE Over Conventional XLPE System

S. NO	Parameters	e-Beam Cross Linking	Coventional XLPE
1	Cross-Linking Bond	C - C	C – S x -C or C – O x -C
2	Operating Temperature	Up to 125°C	Up to 90°C
3	Life of Cable	40 Years (Min.)	10 Years (Min.)
4	Variation in Mechanical Parameters after Ageing at 135°C / 7 Days.	-5%	-25%
5	Effect on High Overload Current	Not Burned	Burned
6	Impurity in Compound	No Colour Pigment	Impurity adding by colour pigment
7	Cold Bend Test	- 40°C	- 15°C
8	Blooming Effects	No Effect.	Chances to bloom to Outer Layer Leading to surface deterioration.
9	Polymer Degradation during cross-linking	No As eB Cross Linking occurs at room temperature	Yes As cross-linking occurs at higher temperature (90°C)
10	Oxidative degradation	No	Yes

Features: eB+ Power Cables

- e-Beam Cross-Linked “Power Cables” .
- Offers 30% higher current carrying capacity*(during overload conditions)
- Rated Temperature : 125°C
- Minimize current leakages with high insulation resistance
- Resistant to corona effect
- Low direct electric losses
- High insulation resistance at elevated temperature, prevents fires caused due to overloads.
- Life Span 40+ years



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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



Who We Are

Founded in 2006, V-Marc India has established itself as a trusted leader in wire and cable manufacturing. We specialize in producing a wide range of products, including LT/HT Power Cables, Medium Voltage Covered Conductors (MVCC), Aerial Bunched Cables, and various Domestic and Industrial Wires and Cables. At V-Marc India, innovation and customer satisfaction form the cornerstone of our vision and mission.

We are committed to continuous improvement and have recently expanded our manufacturing facilities with cutting-edge technology.

We are excited to introduce first time in India our latest innovations: the 'Flexi-Tough eB-HFFR' wires and 'eB+ power and solar cables,' developed using advanced e-Beam technology. With a strong focus on quality and a customer-centric approach, we look forward to shaping the future of wire and cable manufacturing.

Certifications

- ✓ ISO Management System : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018
ISO 27001:2022
- ✓ CE Europe by Certiva Ltd
- ✓ RoHS Compliance by Accenture International Certification
- ✓ BIS License : IS -694 (2010), IS-17048 (2018), IS-1554, (Part 1&2 : 1988), IS - 7098 (Part-1 : 1998), IS-7098 (Part-2 : 2011), IS-7098 (Part-3:1993), IS-14255 (1995), IS–398 (Part-2:1996), IS-398 (Part - 4 : 1994), IS-17293 (2020), IS-17505 (2021)

Flexi Tough Electron Beam Cross-Linked

Single and Multicore Flexible Cables - (confirms to IS 17048:2018)

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 e-Beam 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)

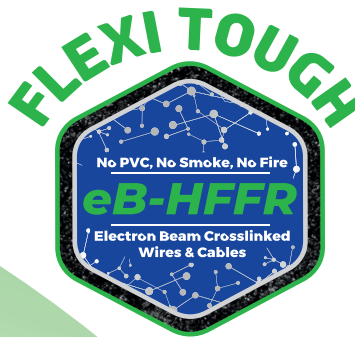
Operating Temperature Range : Up to 150°C

Products Range :

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

Colour:

Single Core - Available in all colors as per specifications including Bi-color (optional)
Multicore – Black

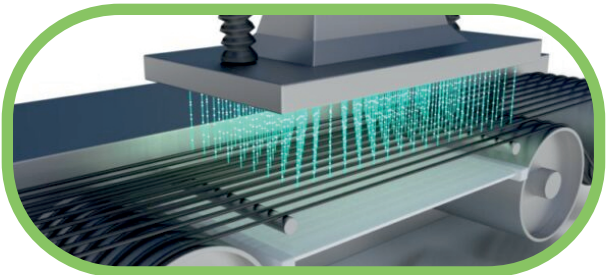


Technical Comparison chart

S. No.	Flexi Tough eB-HFFR Wire	Traditional Wire
1	Conductor Operating Temp. Upto 150°C	Conductor Operating Temp. Upto 70°C
2	Short circuit temperature 250°C	Short circuit temperature 160°C
3	Hot Set Property at 200°C = 50% (Max)	Hot Set – Not Available
4	Smoke Emission (Light Transmission) 90%	Smoke Emission (Light Transmission) 40%
5	Smoke Density 5%	Smoke Density 60%
6	Hydrogen Chloride Free	Hydrogen Chloride 20% Maximum

Features : Flexi Tough eB-HFFR Wires

- 80% Extra current carrying capacity
- Rated Temperature : 150°C
- No short circuit
- Insulation with Special e-Beam Cross-linked XLPO polymer non-toxic, sustainable materials.
- Superior fire resistance
- No smoke during contact with flame
- No harmful or poisonous gas emission
- Lasting performance beyond 60+ years



Solar & Photovoltaic DC Cable- (IS-17293 : 2020, EN-50618, IEC-62930)

Construction:

Conductor: Electrolytic annealed Flexible tinned Copper conductor, as per IS: 8130 : 2013, confirms to IEC 60228, Class 5.

Insulation/sheath : Cross-linked XLPO e-Beam compound.

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

Products Range : up to 400 sqmm

Features

- Electron Beam Cross Linked
- Rated Temperature : Upto 120°C (20,000h)
- Short Circuit Temp : 250°C for Max. 5 Sec.
- RoHS compliant
- UV & Ozone resistant
- Improved oil, chemical resistance & improved crack resistance
- Enhanced mechanical properties in extreme temperature conditions
- Better ageing resistance
- Halogen Free, Flame Retardant, Fire Retardant, Low Smoke Emission
- Flexibility & Stripability for fast and easy installation
- Internal test voltage : 6500 AC for 5 mins

