



# COMPANY PROFILE



*Advanced Solutions for  
Wires & Cables Compounds*

# About Us

Established in 1989, Energya Plastics began compounding standard PVC materials to satisfy the internal needs of the local cable manufacturing company in Jeddah.

Since then, the company has significantly expanded its product range and increased production capacities, firmly positioning itself as a key player in the Wires and Cables (W&C) market across Saudi Arabia and the broader region.

Driven by our focus on innovation and specialized compounds in an increasingly demanding field, Energya Plastics embarked on multi discipline expansion journey since 2007 that saw us transform into a High-tech specialty supplier in the region where quality, excellence, and reliability are consistently expected and delivered.

**US\$110M**

Sales@2025

**200+**

Employees

**105K**

MT Capacity

# Facilities

Energya Plastics facilities include 4 major plants each with its own dedicated technical teams, production lines, specialty laboratories and equipment.

Today Energya Plastics has an annual output of 105K MT. These facilities allow us to ensure consistent quality products to develop innovative solutions for your future needs.



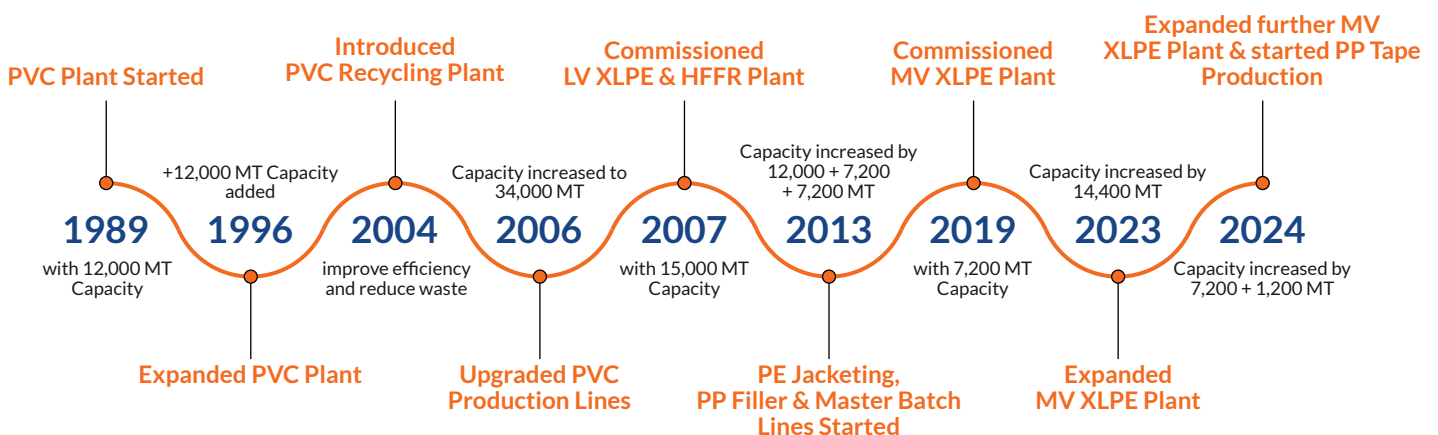
PVC Compounding Plant

LV XLPE/HFFR Plant

PE Jacketing / Semi-Cons Black Plant

Controlled Environment MV XLPE Plant

## Timeline



# Our Commitment

Building on our long legacy and expertise in the W&C market, Energya Plastics has invested in advanced compounding technologies to guarantee superior product consistency and cleanliness. Our state-of-the-art systems ensure excellent efficiency (lower power consumption and reduced waste), unmatched quality (perfect dispersion, homogeneity, and accurate ingredient dosing), and the versatility required to meet diverse specialty requirements.

Our dedication to quality influences every operational element, from raw material selection and analysis to rigorous controlled-environment processes, comprehensive finished good testing, and dedicated after-sales support, all integrated into a unified accredited management system. The Medium Voltage (MV) plant exemplifies this commitment, with air-tight sealed facilities maintained under positive pressure using special filtered air handling units to enforce strict cleanliness standards (ISO 6 in processing areas and ISO 7 in storage areas).

Furthermore, an “**Auto-Inspection System**” across all lines guarantees quality assurance at both the raw material and finished product stages. Finally, Energya Plastics' fully equipped R&D center continuously develops innovative products specifically engineered to match our customers' unique special requirements and applications.

## Advanced R&D and QC Analysis



At EP, innovation is at our core. Our cutting-edge laboratories drive breakthrough research, advanced formulation, and precision process optimization to deliver next-generation products. Backed by rigorous quality-control systems, we ensure every product exceeds international standards, offering unmatched reliability, performance, and excellence.

# Success Pillars

## Benchmark Compounder in KSA

EP offers an integrated portfolio of high-quality compounds for W&C applications including LV & MV XLPE compounds, specialty PVC, and halogen-free flame-retardant compounds. We also provide fully customized compounds tailored to meet specific performance and application requirements.

## Technical Support

EP's expert technical team offers comprehensive consultation and close customer support. We enable our partners to push the boundaries of performance through professional guidance on application challenges, process optimization, and quality enhancements.

## Logistics & Delivery Service

Strategically located and supported by trusted logistics partners, EP provides unparalleled lead times and efficient delivery services.

## After Sales Service

As a customer-centric company, EP is committed to delivering comprehensive services before and after delivery. Our R&D center enables us to address customer needs with optimized solutions, while our Quality & Compliance team provides diligent follow-up to resolve any post-delivery issues.

# Testing Equipment



ECSR Oven



Carbon Black & Ash Content Tester



Oxygen and Temperature Index Tester



Smoke Density Test Status Apparatus



Multi Weight Melt Flow Indexer



Lab Extruder

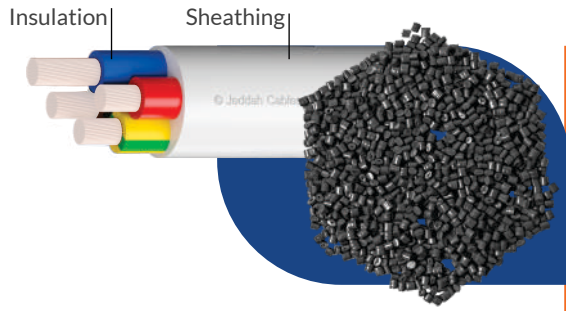


Xenon Lamp Weathering Tester (UV Tests)



Differential Scanning Calorimetry

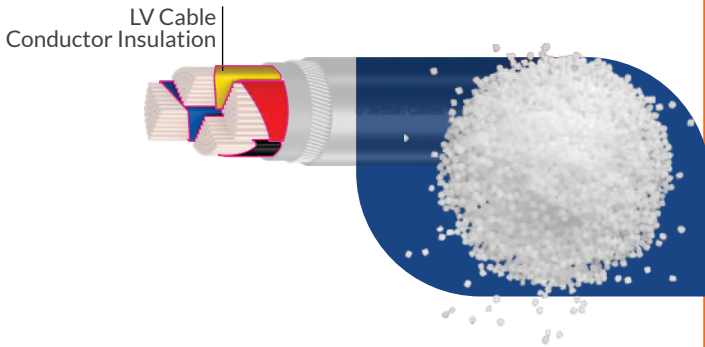
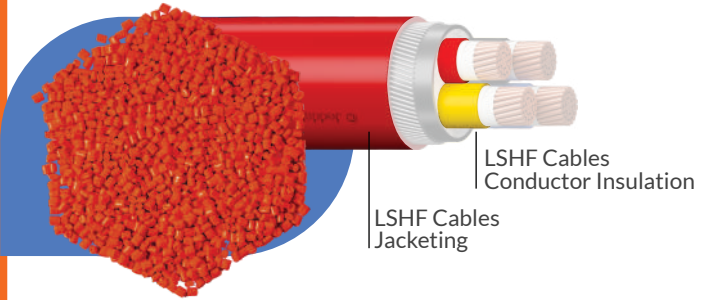
# Product Line



## PVC Compounds

## HFFR/LSHF Compounds

Thermoplastic/Thermosetting

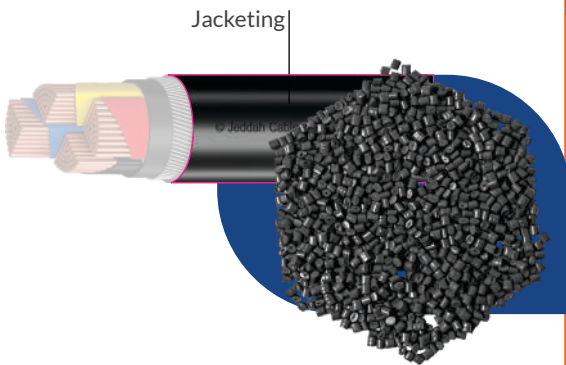
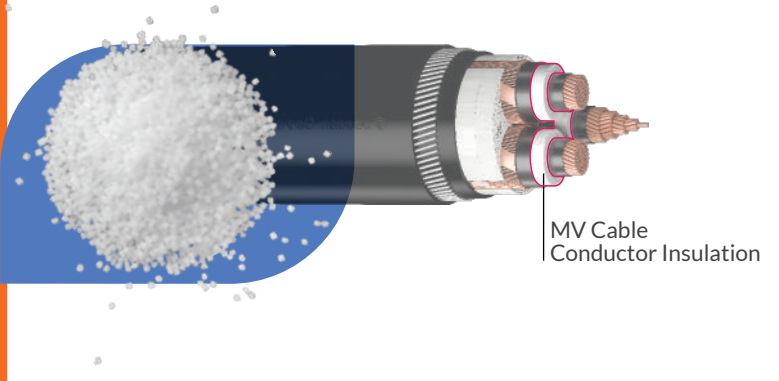


## LV XLPE Compounds

Silane Based

## MV XLPE Compounds

Peroxide Based



## PE Compounds

## PP Yarns & PP Foam Tape



# XL13100

## Silane LV SiXLPE Natural Insulation Compound



### Technical Data Sheet

## General Information

**Description:** Cross-linkable polyethylene compound designed for the insulation of power cables to be mixed with a catalyst master batch (XL91300) at a ratio of 95:5 during extrusion.

**Features:** Fast cure, UV stabilized

**Uses:** Insulation compound for low voltage cables

**Classifications:** BS7655-1.3: GP 8, IEC 60092-351: XLPE, IEC 60502-1: XLPE, BS EN 50290-2-29: XLPE VDE 0207-22: VPE

**Form:** Ø 3 mm x 2 – 3 mm pellets

**Color:** Natural Transparent

## Technical Information

### Physical Properties

	Nominal Value	Test Method
Density <sup>2</sup> (g/cm <sup>3</sup> ) @25°C	0.920 ± 0.002	ASTM D 792
Melt flow rate <sup>2</sup> @190°C, 2.16kg (gm/10min)	0.8 ± 0.50	ASTM D 1238
Durometer Hardness <sup>3</sup> , Shore A	91 ± 2	ASTM D 2240

### Mechanical Properties

Yield Tensile Strength <sup>3</sup> (N/mm <sup>2</sup> )	23 ± 3	IEC 60811-501
Elongation at Break <sup>3</sup> (%)	600 ± 50	IEC 60811-501
Cold bend 3 @ -70°C	No cracks	IEC 60811-504
Shrinkage (%)	< 3	IEC 60811-502

### Electrical Properties

Volume resistivity @ 20°C (Ω.cm)	>1 x 10 <sup>16</sup>	IEC 60502
Insulation Constant Ki @ 90°C (Ω.cm)	>1.3 x 10 <sup>14</sup>	IEC 60502
Dielectric strength @ 20°C (kV/mm)	>21	IEC 60543
Power factor at 50Hz @ 23°C	3 x 10 <sup>-4</sup>	IEC 60250
Permittivity at 50Hz @ 23°C	<2.0	IEC 60250

### Aging @ 135°C for 240 hrs<sup>3</sup>

Change in Tensile Strength (% of unaged)	<10	IEC 60811-401
Change in Ultimate Elongation (% of unaged)	<15	IEC 60811-401

### Hot Set test @ 200°C for 15 min<sup>3</sup>

Elongation under 20N/cm <sup>2</sup> (%)	<100	IEC 60811-507
Permanent elongation after cooling	<10	IEC 60811-507

### Water absorption @ 85°C for 336 hrs<sup>3</sup>

Variation in mass (mg/cm <sup>2</sup> )	<1	IEC 60811-402
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<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Tests performed on grafted compound

<sup>3</sup> Tests performed on cross-linked samples of 95% XL11100 and 5% Catalyst MB XI91300

# XL11100

## Silane LV SiXLPE Natural Insulation Compound



### Technical Data Sheet

## General Information

- Description:** Cross-linkable polyethylene compound designed for the insulation of power cables to be mixed with a catalyst master batch (XL91300) at a ratio of 95:5 during extrusion.
- Features:** Outstanding extrusion properties at high output rates, UV stabilized
- Uses:** Insulation compound for low voltage cables
- Classifications:** BS7655-1.3: GP 8, IEC 60092-351: XLPE, IEC 60502-1: XLPE, BS EN 50290-2-29: XLPE VDE 0207-22: VPE
- Form:**  $\varnothing$  3 mm x 2 – 3 mm pellets
- Color:** Natural Transparent

## Technical Information

### Physical Properties

	Nominal Value	Test Method
Density 2 (g/cm <sup>3</sup> ) @25°C	0.920 ± 0.002	ASTM D 792
Melt flow rate 2 @190°C, 2.16kg (gm/10min)	0.8 ± 0.50	ASTM D 1238
Durometer Hardness <sup>3</sup> , Shore A	91 ± 2	ASTM D 2240

### Mechanical Properties

Yield Tensile Strength <sup>3</sup> (N/mm <sup>2</sup> )	23 ± 3	IEC 60811-501
Elongation at Break <sup>3</sup> (%)	600 ± 50	IEC 60811-501
Cold bend 3 @ -70°C	No cracks	IEC 60811-504
Shrinkage (%)	< 3	IEC 60811-502

### Electrical Properties

Volume resistivity @ 20°C (Ω.cm)	>1 x 10 <sup>16</sup>	IEC 60502
Insulation Constant Ki @ 90°C (Ω.cm)	>1.3 x 10 <sup>14</sup>	IEC 60502
Dielectric strength @ 20°C (kV/mm)	>21	IEC 60543
Power factor at 50Hz @ 23°C	3 x 10 <sup>-4</sup>	IEC 60250
Permittivity at 50Hz @ 23°C	<2.0	IEC 60250

### Aging @ 135°C for 240 hrs<sup>3</sup>

Change in Tensile Strength (% of unaged)	<10	IEC 60811-401
Change in Ultimate Elongation (% of unaged)	<15	IEC 60811-401

### Hot Set test @ 200°C for 15 min<sup>3</sup>

Elongation under 20N/cm <sup>2</sup> (%)	<100	IEC 60811-507
Permanent elongation after cooling	<10	IEC 60811-507

### Water absorption @ 85°C for 336 hrs<sup>3</sup>

Variation in mass (mg/cm <sup>2</sup> )	<1	IEC 60811-402
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<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Tests performed on grafted compound

<sup>3</sup> Tests performed on cross-linked samples of 95% XL11100 and 5% Catalyst MB XI91300

# XL12502

## Silane LV SiXLPE Black Insulation Compound



### Technical Data Sheet

## General Information

- Description:** Cross-linkable polyethylene compound designed for the insulation of overhead power cables to be mixed with a black catalyst master batch (XL92502) at a ratio of 91:9 during extrusion to achieve 2.5% carbon black content.
- Features:** Outstanding extrusion properties at high output rates  
Excellent stress-cracking resistance and outdoor weatherability  
UV stabilized  
Sunlight resistance
- Uses:** Insulation compound for low voltage cables.
- Classifications:** BS7655-1.3: GP 8, IEC 60502-1: XLPE, VDE 0207-22: VPE
- Form:**  $\varnothing$  3 mm x 2 – 3 mm pellets
- Color:** Black

## Technical Information

### Physical Properties

	Nominal Value	Test Method
Density 2 (g/cm <sup>3</sup> ) @25°C	0.920 ± 0.002	ASTM D 792
Melt flow rate 2 @190°C, 2.16kg (gm/10min)	0.90 ± 0.20	ASTM D 1238
Durometer Hardness <sup>3</sup> , Shore A	91 ± 2	ASTM D 2240
Carbon Black content 3 (%)	2.6 ± 0.1	ASTM D 1603

### Mechanical Properties

Yield Tensile Strength <sup>3</sup> (N/mm <sup>2</sup> )	22 ± 1	IEC 60811-501
Elongation at Break <sup>3</sup> (%)	600 ± 50	IEC 60811-501
Cold bend 3 @ -70°C	No cracks	IEC 60811-504
Shrinkage (%)	< 1.5	IEC 60811-502

### Electrical Properties

Volume resistivity @ 20°C (Ω.cm)	>1 x 10 <sup>15</sup>	IEC 60502
Insulation Constant Ki @ 90°C (Ω.cm)	>1.3 x 10 <sup>12</sup>	IEC 60502
Dielectric strength @ 20°C (kV/mm)	>21	IEC 60543
Power factor at 50Hz @ 23°C	3 x 10 <sup>-4</sup>	IEC 60250
Permittivity at 50Hz @ 23°C	<2.2	IEC 60250

### Aging @ 135°C for 168 hrs<sup>3</sup>

Change in Tensile Strength (% of unaged)	5 ± 1	IEC 60811-401
Change in Ultimate Elongation (% of unaged)	10 ± 1	IEC 60811-401

### Hot Set test @ 200°C for 15 min<sup>3</sup>

Elongation under 20N/cm <sup>2</sup> (%)	<90	IEC 60811-507
Permanent elongation after cooling	<10	IEC 60811-507

### Water absorption @ 85°C for 336 hrs<sup>3</sup>

Variation in mass (mg/cm <sup>2</sup> )	<1	IEC 60811-402
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<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Tests performed on grafted compound

<sup>3</sup> Tests performed on cross-linked samples of 95% XL11100 and 5% Catalyst MB XI91300

# MX51220

## Peroxide MV XLPE Natural Insulation Compound



### Technical Data Sheet

## General Information

- Description:** MX51220 is a cross linkable polyethylene compound designed for medium voltage power cables up to 35kV. It is incorporated with active peroxide with excellent properties. It contains special additives which ensure long term thermal stability, long storage life and long production run during cable manufacturing and prevents pre cross-linking during extrusion.
- Features:** Provision for bottom discharge  
High throughput
- Uses:** Sheathing compound for medium voltage cables.
- Classifications:** BS 6622, BS 7655-1.3: GP8, IEC 60502-2: XLPE, IEC 60092-354 & 351: XLPE
- Form:**  $\varnothing$  3 mm x 2 – 3 mm pellets
- Color:** Natural

## Technical Information

### Physical Properties

	Nominal Value	Test Method
Density 2 (g/cm <sup>3</sup> ) @25°C	0.92 ± 0.02	ASTM D 792
Durometer Hardness <sup>3</sup> , Shore A	91 ± 2	ASTM D 2240

### Mechanical Properties

Tensile Strength <sup>3</sup> (N/mm <sup>2</sup> )	> 19.0	IEC 60811-501
Elongation at Break <sup>3</sup> (%)	> 450	IEC 60811-501

### Electrical Properties

Volume resistivity @ 23°C (Ω.cm)	>10 <sup>16</sup>	IEC 60093
Dielectric Constant, 1Mhz	2.3	ASTM-D-150
Dissipation Factor, 1Mhz	<5 x 10 <sup>-4</sup>	ASTM-D-150
Dielectric Strength (kV.mm)	>27	ASTM-D-149

### Aging @ 135°C for 168 hrs<sup>3</sup>

Change in Tensile Strength (% of unaged)	<25	IEC 60811-401
Change in Ultimate Elongation (% of unaged)	<25	IEC 60811-401

### Hot Set test @ 200°C for 15 min<sup>3</sup>

Elongation under 20N/cm <sup>2</sup> (%)	90 ± 30	IEC 60811-507
Permanent elongation after cooling	<5.0	IEC 60811-507

### Water absorption @ 85°C for 336 hrs<sup>3</sup>

Variation in mass (mg/cm <sup>2</sup> )	<1	IEC 60811-402
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<sup>1</sup> Typical laboratory results obtained for pressed sheets. Actual values are influenced by extruder type, head, tools, screw geometry and processing conditions. These values are not to be construed as specifications.

<sup>2</sup> 500 mm/min.

<sup>3</sup> Tests performed on cross-linked samples

# PP Yarns Cable Fillers



## General Information

- Description:** Polypropylene Yarn Filler is a high quality and cost-effective polypropylene filler for multi-core power and telecommunication cables. It is engineered for optimum performance in terms of strength, durability, and adaptability. In the form of yarns, its basic application is to achieve any desired shape by filling voids and gaps between insulated cores during cable. It also acts as a cable reinforcing material with non-hygroscopic characteristics.
- Features:** Low bulk density  
Easy to strip during cable installation  
Hydrophobic with very low moisture absorption  
Thermally stable
- Uses:** Cable fillers
- Classifications:** ASTM D1907, ASTM D2256, ASTM D2256, ASTM D2259
- Twist Type:** Z-type (4 - 6 twists/meter)
- Color:** White
- Packaging:** Available in the form of rolls with and without cylindrical paper core.



# PP Tape For Cable Binding

## General Information

- Description:** Foamed Polypropylene (PP) Tape used in power cable manufacturing as a binding material. Its primary function is to securely hold the cable's internal components together, ensuring structural integrity and dimensional stability during production and service.
- Features:** Foamed structure  
Thermal resistance  
Binding and stabilization
- Uses:** Cable binding
- Color:** White
- Packaging:** Available in the form of rolls with and without cylindrical paper core.



# PVC Compound For Insulation & Sheathing



## General Information

**Description:** Poly Vinyl Chloride (PVC) compounds are naturally biologically and chemically resistant, making them the plastic of choice for tough applications where high resistance to corrosion is required. With the addition of stabilizers and plasticizers, it can become flexible enough to be used in various applications.

## Technical Information

### For Sheathing

Grade	Product Description	Classifications	Temp. Rating	Fire Retardant (FR)	Anti Termite (AT)	UV Resistant	Oil Resistant (OR)	Density (g/cm <sup>3</sup> ) ASTM D 792	Tensile Strength (N/mm <sup>2</sup> ) ASTM D 638	Elongation at Break (%) ASTM D 638	Hardness (Shore A) ASTM D 2240	Thermal Stability @ 200°C (MJ) BS 2782	Mass loss (mg/cm <sup>2</sup> ) ASTM D 573	Oxygen Index (%) ASTM D2863
VC21110	TM-1 Nat General Purpose	BS7655-4.1: TM- 1	70°C					1.47	17	300	88	>80	<1.5	
VC71115	TM -2 Gray Flexible	IEC60227: Type D, BS7655-4.1: TM- 2	70°C					1.47	17	300	80	>75	<1.5	
VC72111	TM -2 White Flexible	IEC60227: Type D, BS7655-4.1: TM- 2	70°C					1.47	14.5	300	75	>75	<1.5	
VC81110	ST- 1 Nat General Purpose	IEC60502: ST 1	80°C					1.48	14.5	280	80	>75	<1.5	
VC90110	ST- 2 Nat	IEC60502: ST 2, BS7655-4.2: Type 9, IS 5831: Type ST 2	90°C					1.4	20	300	92	>75	<1.0	
VC92112	ST- 2 Black	IEC60502: ST 2, BS7655-4.2: Type 9, IS 5831: Type ST 2	90°C			✓		1.5	16.5	300	85	>75	<1.5	
VC95220	ST-2 FR Cat-A	IEC60502: ST 2, BS7655-4.2: Type 9	90°C	✓				1.37	20	300	90	>75	<1.5	>33
VC95530	ST-2 FTR Cat-C	IEC60502: ST 2, BS7655-4.2: Type 9, IS 5831: Type ST 2	90°C	✓	✓			1.5	18	285	85	>80	<1.2	>30
VC95540	ST-2 FTR Cat-A	IEC60502: ST 2, BS7655-4.2: Type 9, IS 5831: Type ST 2	90°C	✓	✓			1.5	18	300	85	>80	<1.2	>33
VC95630	ST-2 FOTR Cat-C	IEC60502: ST 2, BS7655-4.2: Type 9, IS 5831: Type ST 2	90°C	✓	✓	✓	✓	1.5	17.5	275	85	>80	<1.0	>30
VC95640	ST-2 FOTR Cat-A	IEC60502: ST 2, BS7655-4.2: Type 9, IS 5831: Type ST2	90°C	✓	✓	✓	✓	1.5	17.5	275	85	>80	<1.0	>33
VC92763	ST-2 FTUVSOR	IEC60502: ST 2, BS7655-4.2: Type 9, IS 5831: Type ST2	90°C	✓	✓	✓	✓	1.47	16.5	300	85	>80	<1.0	>30
VC92663	TM53 FUVSR/CAT-A Black	BS EN 50290-2-22	90°C	✓		✓		1.5	19	260	90	>80	<1.5	
VC68110	ST-1 Nat General Purpose	IEC60502: ST 1, BS7655-4.2: Type 6	80°C					1.58	16.5	275	89	>60	<2.0	

### For Insulation

Grade	Product Description	Classifications	Temp. Rating	Fire Retardant (FR)	Density (g/cm <sup>3</sup> ) ASTM D 792	Tensile Strength (N/mm <sup>2</sup> ) ASTM D 638	Elongation at Break (%) ASTM D 638	Hardness (Shore A) ASTM D 2240	Tensile Strength (N/mm <sup>2</sup> ) ASTM D 638	Insulation Resistance (MΩ.Km) BS 7682	Hardness (Shore A) ASTM D 2240	Thermal Stability @ 200°C (MJ) BS 2782	Mass loss (mg/cm <sup>2</sup> ) ASTM D 573
VC14110	TI-1 General Purpose	BS50363-3: TI-1	70°C		1.45	18.5	285	88	115	>75	<1.5	>80	<1.5
VC41110	TI-2 Flexible	BS50363-3: TI- 2	70°C		1.5	17	290	75	10	>75	<1.5	>75	<1.5
VC31110	TI-3 Heat Resistant	IEC60227: Type E, BS7655-3.1: TI-1, BS7655-4.1: TM-3	90 - 105°C	✓	1.4	20	275	90	>300	>275	<1.5	>75	<1.5
VC33110	SI-3 Heat Resistant UL	BS7655-3.1: TI -3, UL1581: THHN/ THWN /UL-83, DIN/VDE 207: Part 4	105°C	✓	1.4	22	300	90	>250	>260	<1.5	>75	<1.5
VC52110	SI-5 Heat Resistant	IEC60227: Type E	85°C	✓	1.4	22	325	90	>350	>225	<1.5	>75	<1.0

The grades presented herein are for reference only. Customized compounds including specific colors, tailored properties, and specialized packaging are available upon request.





## Contact us

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