

Product News

FR6012

HFFR Mono-Layer Compound
for ST12 Sheathing Applications

Tough, Flame Retardant Jacketing



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Combining Mechanical Strength with Flame Retardant Performance

Fires in buildings or advanced installations can either be fatal or cause considerable financial losses. By using halogen-free flame retardant cable jacketing, the severe consequences of such fires can be greatly reduced. This is broadly recognised by the utility industry and cable standards are continuously being developed to meet the need for improved reliability and safety.

Updated cable standards now include specific requirements for flame retardant sheathing compounds – material type ST12. **ST12 cables are built for safety, especially in confined environments where fire hazards & human occupancy intersect:**

- **Public Buildings:** airports, hospitals, shopping malls, where safety is top priority & demand LSZH
- **Transportation Infrastructure:** tunnels, subways, train stations where smoke & toxic emissions must be minimized
- **Data Centers & Control Rooms:** where protecting sensitive electronics from corrosive smoke is essential
- **High-Occupancy Residential & Office Buildings:** especially in areas with strict fire codes

FR6012 is a black, thermoplastic, halogen free retardant jacketing compound based on Borealis unique PE base resin combined with advanced filler with high mechanical strength & high flame retardancy.

Benefits

- Designed for ST12 and CPR Euroclass expectation – enabling global usage
- Halogen-free & Low smoke – minimizing toxic smokes and corrosive gases
- Good flame-retardant properties – enhancing safety in fire situations
- High mechanical strength & resistance to crack propagation of the jacketing
- Easy to process on conventional jacketing lines



Physical Properties

Property	Typical Value	Unit	Test Method
Density	1315	kg/m ³	ISO 1183-1
MFR 190 °C/21.6 kg	6.3	g/10 min	ISO 1133-1
Hardness, Shore D	57	–	ISO 868
Tensile Strength	> 15	MPa	ISO 527-2
Elongation at Break	> 500	%	ISO 527-2
Tensile Strength after Ageing (240 h, 110 °C)	> 15	MPa	IEC 60811-401
Elongation after Ageing (240 h, 110 °C)	> 350	%	IEC 60811-401
Pressure Test at High Temperature (110 °C, 6 h)	< 10	%	IEC 60811-508
Tear Resistance	15	N/mm	HD 605 S2
Water Absorption (70 °C, 14 days)	0.4	Mg/cm ²	IEC 60811-402

Specifications

- IEC 60502: 6 to 30 kV
- IEC 60840: 30 to 150 kV
- IEC 62067: 150 to 500 kV



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