



ZC-5106 Thermoplastic HFFR Sheath Compound

This material is used for thermoplastic low smoke halogen free flame retardant polyolefin sheath materials. It is produced through continuous mixing plasticizing granulation based on polyolefin as matrix, adding inorganic flame retardants, compatilizer, lubricants, antioxidant and other additives. The product has stable properties, good extrusion process ability, mechanical properties and flame retardant properties.

Application: Flame retardant polyethylene wire and cable sheath layer; Communication cable, control cable and power cable sheath; Maximum working temperature is 90°C.

Property

Item		Unit	Test method	Typical value
Density@23°C		g/cm ³	ASTM D792	1.44
Tensile strength		MPa	IEC 60811-1-1	11.8
Elongation at break		%		195
Impact embrittlement performance@-25°C	Failure number	Piece	ASTM D746	0/30
After aging @100°C, 168h	Tensile strength	MPa	IEC60811-1-1	13.0
	Elongation at break	%		177
	Tensile strength variation	%	IEC 60811-1-2	10
	Breaking elongation variation	%		-9
Thermal deformation @90°C, 4h		%	IEC 60227-1	35
Dielectric strength@20°C		MV/m	IEC 60243-1	33
Volume resistivity@20°C		Ω·m	IEC 60093	8×10 ¹²
Smoke density	Flaming	—	ASTM E662	65
	No flaming	—		215
Oxygen index		—	ISO 4589	34
The halogen acid gas content		mg/g	IEC 60754-1	3
pH		—	IEC 60754-2	6
Electrical conductivity		μS/mm	IEC 60754-2	3

Processing

Recommend to use specific low smoke halogen-free screw. L/D ratio= 25:1, Compression ratio≤1.5:1.

Zone	Feeding	Head	Melting	Die(Mode)
Temperature Range°C	110-120	120-140	140-150	155-160

- Above temperature is only for reference.

Storage

Keep at room temperature; Storage environment should be clean, dry and ventilated; Please dry it after a long-time opening; Best use within six months from the date of production.

Product packing

25kg in moisture resistant aluminum laminated bags with composite paper bags outside; palletized bottom.