

**ZC-7101 Thermoplastic HFFR TPE Insulation and Sheath(105℃)**

This material is used for halogen-free flame retardant(E-beam crosslinkable) wire and cable insulation material. It is made of high quality resin, flame retardant, antioxidant agent and cross-linking agent by mixing granulation. None-halogen property makes the materials non-toxic when burning; it has excellent flame retardancy, good physical and mechanical properties and processing performance; Heat resistance level is 105℃, can pass the VW-1 combustion test.

Standard: BS EN 50525/2014

Application: EN-SS/Flexible wire

Property

Item		Unit	Test method	Typical Value
Density@23℃		g/cm ³	ASTM D792	1.05
Tensile strength		MPa	IEC 60811-1-1	11.5
Elongation at break		%		580
After aging @135℃, 168h	Tensile strength variation	%	IEC 60811-1-2	12
	Breaking elongation variation	%		-10
After aging @135℃, 240h	Tensile strength variation	%	IEC 60811-1-2	12
	Breaking elongation variation	%		-17
Hot prolongation@200℃, 0.2MPa, 15min	Elongation under the load	%	IEC 60811-2-1	25-40
	Permanent deformation	%		0
Low temperature bending test@-45℃		—	IEC 60811-1-4	No crack
Combustion test		—	ASTM E662	VW-1
The halogen acid gas content		mg/g	IEC 60754-1	none
pH		—	IEC 60754-2	5.0
Electrical conductivity		μS/mm	IEC 60754-2	2.5
Dielectric strength@20℃		MV/m	IEC 60243-1	≥25
Volume resistivity@20℃		Ω·cm	ASTM D257	1.5×10 ¹⁵
Hardness		Shore A	ASTM D2240	80

Processing

Recommend to use conventional single screw extruder and specific low smoke halogen-free screw. Melt pressure to compounds shall be enough when extruding cables.

Zone	1	2	3	4	5	6	Neck	Head
Temperature Range℃	160	165	170	175	180	185	190	190

- 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.