

EFRHATAN 90 A

Polyurethane (Polyether based)

Crosspolimeri S.p.A.

Message:

EFRHATAN : is the trade-mark of our modified polyurethane-polyether flame retardant halogen free.The type 90 A 57 have e glossy surface and the 90 A 05 mantain matt aspect.

EFRHATAN 90 A : is a thermoplastic elastomeric polyurethane HFFR compound polyether basis.This compound offer outstanding chemical and hydrolysis resistance.

The material exhibit excellent physical-mecanical performances resulting in tubes and sheatings with optimal kink resistance,strength characteristics and flame retardance.

Good processability and excellent extrusion stability.

Material to use on the production of cables for electronic devices connection and thechnical sheathing.

General Information			
Features	Workability, good		
	Good strength		
	Good chemical resistance		
	Kink resistance		
	Hydrolysis resistance		
	Halogen-free		
	Flame retardancy		
Uses	Cable sheath		
	Wire and cable applications		
Forms	Particle		
Processing Method	Wire & Cable Extrusion		
	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	1.24	g/cm ³	ISO 1183
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	92		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	25.0	MPa	ISO 527-2
Tensile Strain (Break)	> 400	%	ISO 527-2
Abrasion Resistance	> 35.0	mm ³	DIN 53516
Exercise Temperature	90	°C	
Cold Flexibility	-40	°C	ISO 458
Thermal Stability	> 1	hr	ISO R 182
Head Temperature	180	°C	
Elastomers	Nominal Value	Unit	Test Method

Tear Strength	> 60	kN/m	DIN 53515
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (120°C, 168 hr)	< 20	%	UL 1581
Change in Tensile Strain at Break in Air (120°C, 168 hr)	< 30	%	UL 1581
Change in Tensile Strength (100°C, 168 hr, in ASTM #2 oil)	< 20	%	UL 1581
Change in Tensile Strain at Break (100°C, 168 hr, in ASTM #2 oil)	< 30	%	UL 1581
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
Oxygen Index ¹	27	%	ASTM D2863
Extrusion	Nominal Value	Unit	
Drying Temperature	90.0	°C	
Drying Time	3.0 - 6.0	hr	
Cylinder Zone 1 Temp.	135	°C	
Cylinder Zone 2 Temp.	145	°C	
Cylinder Zone 3 Temp.	160	°C	
Cylinder Zone 4 Temp.	170	°C	
Die Temperature	190	°C	
Extrusion instructions			
The compound can be processed on extruders with a L/D >= 18 at least, with an adequate thermoregulation of the barrel. Standard single screws used for polyethylene or PVC are suitable. Whilst the typical nylon (short compression) screws will certainly NOT work. A compression ratio of 1:3 will be sufficient for proper melting of the material. Final conditions depend on the available extruder line and screw design; melt temperature shouldn't exceed 200°C.			
NOTE			

1. Indicative value

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