



Crosslinkable HFFR  
compounds for cables





## Description

This is a range of polyolefin based HFFR compounds, crosslinkable by heat and moisture and by addition of a suitable catalyst before extrusion (SIOPLAS method). This solution is suitable for the production of crosslinked insulation or sheathing without the use of specific curing equipment (without a CV line).

## Product range

Grade	Description	Classification				Density	Hardness	Tensile Strength **	Elongation at Break **	Oxygen Index	MFI (150°C/21, 6Kg.)
		EN 50363	VDE 0207 0266	BS 7211	Others	ISO 1183 gr/cm3 (± 0,02)	ISO 868 Shore D (± 2)	ISO 527 N/mm2	ISO 527 %	ISO 4589 % (± 1)	ISO 1133 Gr/10'
HFX 500S	Standard sheathing	M2	HJ1 HXI1		TUV 2Pfg1169 CEI 20-91 M21 VDE PV 01	1,47	45	≥ 14	≥ 200	31	3
HFX 500P	Sheathing and insulation	M2 G9 G10	HJ1 HXI1	EI5		1,5	47	≥ 12	≥ 180	35	3
HFX 515HM	Sheathing and insulation	M2 G9 G10	HJ1 HXI1 HXM1	EI5	TUV 2Pfg1169 CEI 20-91 M21-G21 VDE PV 01	1,41	45	≥ 13	≥ 250	33	4,5
HFX 519HS	Sheathing and insulation Improved processing	M2 G9 G10	HJ1 HXI1 HXM1	EI5	TUV 2Pfg1169 CEI 20-91 M21-G21 VDE PV 01	1,36	38	≥ 12	≥ 270	30	3
HFX 521	Sheathing and insulation Oil resistant	M2 G9 G10 EM8	HJ1 HXI1 HM3	EI5	EN 50264-1 EI 101-104 EM101-104 IEC 60092 SHF2	1,46	50	≥ 12	≥ 180	34	2
HFX 525F	Sheathing and insulation High speed extrusion	M2 G9 G10	HJ1 HXI1 HXM1	EI5		1,49	46	≥ 11	≥ 180	34	12
HFX 527OR	Sheathing and insulation Oil and Mud resistant	EM8 EM10	HXI1 HM3		EN 50264-1 EM101-104 BS 7655 LRS1-SW3-SW4 IEC 60092 SHF2 NEK 606	1,61	39	≥ 11	≥ 170	38	8 21,6 Kg. At 190°C
CAT 115/1	High reactive catalyst	2-3%			CAT 119LS	Low reactive catalyst			4-5%		
CAT 121OR	High reactive catalyst Oil resistant	4-6%			CAT 113/UVS	Catalyst for extreme ageing test (solar application) 5-7%					

Notes: All catalysts can be additivated with UV stabilizers for outdoor applications  
\*\* Mechanical properties are measured on crosslinked specimens

## Processing

The compound must be blended before extrusion with an exact amount of catalyst. Processing of silane grafted compounds with the catalyst is a reactive extrusion, the faster the material is extruded the better the results will be. Time at high temperature should be kept to a minimum to avoid processing issues such as pre-scorch. Processing is made within a range of 120°C-200°C. The extrudate must be cooled down into a water bath, which provides the moisture necessary for crosslinking. The reaction is fast but diffusion of moisture in the material is a limiting factor. For this reason a hot water bath or a low pressure sauna can be used to speed up crosslinking process after extrusion. Generally speaking curing time depends from wall thickness, for example 1 mm wall thickness may crosslink in 4-6 hours in extreme moisture conditions. In case of self curing, time depends on the specific ambient temperature and humidity in which the cable is stored after extrusion.

## Storage

The grafted compound must be stored at ambient temperature (not exceeding 30°C) in closed and unbroken moisture resistant bags, in order to avoid exposure to sunlight and water absorption. Long stocking time may negatively affect the quality of the material. Therefore they shall be used within 6 months from the compounding date and within a few hours if the bags are opened. It is recommended to store separately the grafted compound and the catalyst, and mix only when ready to process.

## Packaging

All compounds are available in 25 Kg. Aluminium bags on wooden pallet.

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