Fainplast compounds

HFFR CROSSLINKABLE FOR CABLES

HFX - Halogen free flame retardant compounds crosslinkable with addition of specific catalyst (Sioplas method) or with e-beam technology in order to achieve better mechanical properties and higher heat resistance.

HFFR CROSSLINKABLE FOR CABLES

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 g/cm³	ISO 868 Shore D	ISO 527 N/mm²	ISO 527 %	ISO 4589 %	ISO 1133 g/10'
HFX 500S	Standard sheathing	M2-M18	HJ1 HXI1		EN 50618	1,47	45	≥ 14	≥ 200	31	3
HFX 500P	Sheathing and insulation	M2-M18	HJ1 HXI1	EI5	EN 50618 SHEATING	1,49	46	≥ 12	≥ 180	35	3
HFX 515VHS	Sheathing and insulation	M2-M18 G10-G18	HJ1 HXI1 HXM1	EI5	EN 50618	1,42	45	≥ 13	≥ 250	33	6,5
HFX 5396	Sheathing and insulation	M2-M18 G10-G18	HJ1 HXI1 HXM1	EI5	EN 50618	1,44	48	≥ 12	≥ 200	34	6,5
HFX 519HS	Sheathing and insulation Improved processing	M2-M18 G10-G18	HJ1 HXI1 HXM1	EI5	EN 50618	1,37	38	≥ 12	≥ 270	30	3
HFX 521	Sheathing and insulation Oil resistant	M2-M18 G10-G18 EM8	HJ1 HXI1 HM3	EI5	EN 50264-1 EI 101-104 EM101-104 IEC 60092 SHF2	1,46	50	≥ 12	≥ 180	34	2
HFX 531	Sheathing and insulation Oil resistant	M2-M18 G10-G18 EM8	HJ1 HXI1 HM3	EI5	EN 50264-1 EI 101-104 EM101-104 IEC 60092 SHF2	1,42	52	≥ 12	≥ 180	34	3
HFX 5003	Sheathing and insulation	M2-M18	HJ1 HXI1 HXM1	EI5	EN 50618 SHEATING	1,47	48	≥ 11	≥ 160	35	3
HFX 900VHS	Flexible insulation	G7-G16 G8 EI4				1,32	34	≥ 12	≥ 450	22	11
HFX 529	Flexible insulation	G7-G16 G10-G18	HJ1 HXI1 HXM1	EI5		1,40	44	≥ 11	≥ 280	31	6,5
HFX 076/10	Sheathing and insulation Cca CLASS CPR	G17		EI5	EN 50618 SHEATING	1,52	46	≥ 10	≥ 140	43	2,5
HFX 076/12	Sheathing and insulation Cca CLASS CPR	G17		EI5	EN 50618 SHEATING	1,52	44	≥ 10	≥ 140	44	3

Catalysts			
CAT 115/1	High reactive catalyst 2-3%	CAT 125HCT	Med. reactivity catalyst 4-5%
CAT119LS	Low reactive catalyst 4-5%	CAT 033/UV	Catalyst for extreme ageing tests 6-7% (solar application)
CAT121LS	Med. reactivity catalyst 4-5%	CAT 1273/UV	Catalyst for extreme ageing tests 6-7% (solar application)
CAT 113/UV	Catalyst for extreme ageing tests 6-7% (solar application)		

Notes: All catalysts can be additivated with UV stabilizers for outdoor applications - ** These 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.

Packaging

All compounds are available in 25Kg. Bags, big bags or Oktabins on wooden pallet

Storage

All compounds 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 absorbation. 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.

Notes

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 CCV line).

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