



# HFFR THERMOPLASTIC FOR CABLES

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A premium range of Halogen free, flame retardant and low smoke compounds for production of cables installed in specific environments where flame retardancy and absence of toxic and dark fumes is of vital importance.

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Grade	Description	Classification				Density ISO 1183 g/cm <sup>3</sup>	Hardness ISO 868 Shore D	Tensile Strength ISO 527 N/mm <sup>2</sup>	Elongation at Break ISO 527 %	Oxygen Index ISO 4589 %	Melt flow index ISO 1133 g/10'	Volume Resistivity @ 20°C ASTM D 257 Ω.cm
		EN 50363	VDE 0207 0250	BS 7655	Others							
HF 211M	General purposes 70°C	M16 Ti6	HM2 HM5	LTS 1-3	IEC 60092-SHF1	1,49	50	≥ 12	≥ 180	37	6,5	1 x 10 <sup>15</sup>
HF 233	General purposes 70°C High fluidity	M16 Ti6 TM7	HM2 HM5	LTS 1-3	IEC 60092-SHF1 IEC 60502-ST8	1,49	50	≥ 12	≥ 180	37	10	1 x 10 <sup>15</sup>
HF 233HE	General purposes 70°C High fluidity	M16 Ti6 TM7	HM2 HM5	LTS 1-3	IEC 60092-SHF1 IEC 60502-ST8	1,52	48	≥ 11	≥ 160	42	10	1 x 10 <sup>15</sup>
HF 235HS	General purpose 80°C First price	M16 Ti6 TM7	HM2 HM4 HM5	LTS 1-3	IEC 60092-SHF1 IEC 60502-ST8	1,53	50	≥ 11	≥ 160	32	5,5	1 x 10 <sup>14</sup>
HF 417	General purposes 80°C	M1 M16 TM7	HM4 HM5	LTS 1-2-3-4	IEC 60502-ST8	1,5	50	≥ 12	≥ 180	40	3,5	1 x 10 <sup>15</sup>
HF 018/25	General purposes 80°C High fluidity	M1 M16	HM4	LTS 2		1,51	53	≥ 11	≥ 170	35	10	1 x 10 <sup>15</sup>
HF 239	High flame retardancy suggested for CPR applications	M1 M16	HM2 HM5			1,57	49	≥ 11	≥ 155	40	5,0	1 x 10 <sup>15</sup>
HF 0125B	High flame retardancy suggested for CPR applications	M1 M16 Ti7	HM2 HM5	LTS 1-3		1,60	50	≥ 11	≥ 150	50	4,5	1 x 10 <sup>15</sup>
HF 245D	High flame retardancy suggested for CPR applications	M1 M16 Ti7	HM2 HM5	LTS 1-3		1,55	48	≥ 11	≥ 150	40	6	1 x 10 <sup>14</sup>
HF 241CB	High flame retardancy suggested for CPR applications	M1 M16 Ti7	HM2 HM5			1,56	51	≥ 11	≥ 160	47	5	5 x 10 <sup>15</sup>
HF 2411	High flame retardancy suggested for CPR applications	M1 M16 Ti7	HM2 HM5			1,57	53	≥ 11	≥ 140	48	3	8 x 10 <sup>14</sup>
HF 427	Good stress crack resistance – armoured cables	M1 M16	HM4	LTS 1-3-4	IEC 60502-ST8	1,48	49	≥ 13	≥ 200	35	4	5 x 10 <sup>15</sup>
HF 411M	General purposes 80°C Improved processing	M1 M16	HM4 HI2	LTS 1-3-4	IEC 60502-ST8	1,49	52	≥ 14	≥ 190	40	4	5 x 10 <sup>14</sup>
HF 039/4H	High flexibility	Ti6 TM7	HM2			1,39	41	≥ 11	≥ 260	34	13	1 x 10 <sup>15</sup>
HF 231 F6	High flexibility – bending resistance	M1 M16 Ti6 TM7	HM2			1,39	40	≥ 11	≥ 230	38	10	5 x 10 <sup>14</sup>
HF 243 RL	High flexibility – bending resistance	M1 Ti6 TM7	HM2			1,48	46	≥ 13	≥ 190	44	8,0	2 x 10 <sup>15</sup>
HF 045/16M	Easy processing Ultra thin insulation	M1 M16	HM2	LTS 2		1,45	49	≥ 12,5	≥ 160	40	5	2 x 10 <sup>15</sup>
HF 219MR/UV	Rodent and termite resistant sheathing	M1 M16	HM4	LTS 1-2-4	IEC 60502-ST8	1,49	49	≥ 11	≥ 180	44	4,5	1 x 10 <sup>14</sup>
HF 425HSD	Special char forming sheathing suggested for CPR applications	M1 M16	HM2 HM4 HM5		IEC 60502-ST8	1,54	52	≥ 11	≥ 170	35	4	1 x 10 <sup>15</sup>
HF 098	High flame retardancy and temperature index	M1 M16	HM2 HM5	LTS 1-3	EN 50290-2-27	1,5	48	≥ 11	≥ 180	44	4	1 x 10 <sup>15</sup>
HF 079/4	High flexibility - low temperature sheathing (-48°C)	TM7 Ti6	HM2		IEC 60502-ST8	1,44	36	≥ 9,5	≥ 240	32	3	5 x 10 <sup>14</sup>
HFC 0108	Bedding				BS 7846	1,7	44			35	10	> 10 <sup>14</sup>
HFC 0108/3	Bedding high Oxygen index					1,68	42			50	10	> 10 <sup>14</sup>
HFC 0115/1	Bedding for tandem extrusion					1,9	31			55 ± 5	87 ± 5	1,5 x 10 <sup>14</sup>
HFC 0122/5A	Bedding for tandem extrusion					1,86	37			65 ± 5	75 ± 5	>5 x 10 <sup>13</sup>

## Notes

Hax is a range of thermoplastic, halogen free and flame retardant compounds based on polyolefines and specific mineral fillers. These grades can be used for insulation, sheathing and bedding of cables installed in environments where low flammability and low smoke emission during combustion is of vital importance.

## Processing

These compounds have been designed for an easy processing, whilst maintaining good mechanical-thermal properties and a good oxygen index value. They can be processed using extruders with a low compression ratio or on standard PVC extruders, and within a temperature range of 100-180°C (unless else specified on product TDS)

## Storage

These compounds must be stored at ambient temperature (not exceeding 30°C) in closed and unbroken bags, in order to avoid exposure to sunlight and moisture. Long stocking time may negatively affect the quality of the material. Therefore they shall be used within 6 months from the compounding date. After this time it is necessary to dry the material before extrusion.

## Packaging

All compounds are available in 25 Kg. PE bags, big bags or oktubins of 1250 Kg. on wooden or plastic pallets.