

## TECHNICAL INFORMATION



# HF 417

May 2015

### THERMOPLASTIC HALOGEN FREE, FLAME RETARDANT AND LOW SMOKE EMISSION COMPOUND, FOR CABLE INSULATION AND SHEATING

#### Description

HF 417 is a thermoplastic, flame retardant, and halogen free compound on polyolefinic basis. It can be used for the production of energy, signal and control cables.

**Range material operating temperatures : -25 °C(fixed installation.)//+80 °C.**

The properties of this compound comply with the requirements of EN 50363-0 type M1, EN 50363-7 type TI7, IEC 60502 ST8, VDE 0207 Part 24 type HM2-HM4 ,BS 7655 type LTS1-LTS2-LTS3-LTS4, EN 50290-2-27, UNE 21123-4:2010 - ANNEX A-Table1 type DMZ-E, IEC 60092-359 type SHF1.

#### Technical characteristics

Property	Test method	Unit	Typical Value
Density	ISO 1183	g/cm <sup>3</sup>	1.50
Hardness at 15"	ISO 868	Shore D	50
Tensile strength	ISO 527	N/mm <sup>2</sup>	12.0
Elongation at break	ISO 527	%	180
Oxygen Index	ISO 4589	% O <sub>2</sub>	40
Hot pressure test at 90 °C	IEC 60811	%	< 50
Melt Flow Index (150 °C/21.6Kg)	ISO 1133	g/10 min	3,5
Volume Resistivity 20 °C (Alternating Polarity Method)	ASTM D257 Electrodes	Ω·cm	1· 10 <sup>15</sup>
Water absorption	IEC 60811	mg/cm <sup>2</sup>	< 5.0
Emission of Halogenidric acids	EN 50267-2-1/IEC 60754-1	%	< 0.5
pH	EN 50267-2-2/IEC 60754-2		> 4.3
Conductivity	EN 50267-2-2/IEC 60754-2	μS/mm	< 10
Temperature Index	ISO 4589-3	°C	> 330
Ozone Resistance	EN 50396:2007-8.1 A,B		No Cracks
Optical density of smoke	EN 61034-2	% trasmittance	> 80
Fluorine content	EN 60684-2	%	< 0.1
Cold flex	ISO 458-2	°C	-18 ± 2

The typical values reported in the table have been obtained from measurements made on extruded samples or pressed plates

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## Processing

This thermoplastic compound has been designed for an easy processing, whilst maintaining good mechanical-thermal properties, and a medium-high LOI value. It can be processed using extruders with a low screw compression ratio (halogen free or PVC type), and with a temperature profile as that given below, which is however indicative, as it may depend on the equipment design adopted.

Zone 1	Zone 2	Zone 3	Zone 4	Collar	Head	Die
130 - 150	130 - 160	140 - 160	140 - 160	150 - 165	150 - 165	150 - 170

## Storage

The thermoplastic compound 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 it shall be used within 3 months from the compounding date. After this time it's necessary to dry the material before extrusion.

## Packaging

Available in 25 Kg PE bags, big bags or oktabins of 1250 Kg on wooden pallet

Our technical service is at your disposal, for further information and assistance.

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