



Benvic IBE S.L.

# TECHNICAL DATA SHEET

## HFS002

### Product description

Halogen free and flame retardant thermoplastic sheathing compound for LV cables.

HFS002 is based on polyolefin and flame retardant fillers. The fire resistant system contributes to reduce the smoke and corrosive gases emission without halogenhidric acids evolution.

### Applications:

LV cable sheathing

### Normas:

UNE 21123-4 material tipo DMZ-E

### Standards:

UNE 21123-4 material type DMZ-E, IEC 60502-1 ST8, IEC 60092 SHF1

## Physical properties

PROPERTIES	METHOD	UNIT	VALUE
Density	UNE EN ISO 1183	gr/cm <sup>3</sup>	<b>1,59</b>
Tensile Strength	UNE EN ISO 527	MPa	<b>&gt; 10</b>
Elongation at break	UNE EN ISO 527	%	<b>&gt; 150</b>
Mooney Viscosity ML (1+4 )/140 °C	ASTM D1646	MU	<b>35</b>
Water Absortion	EN60811	mg/cm <sup>2</sup>	<b>&lt; 10</b>
Change in Tensile Strenght after 240 hours at 100 °C	EN 60811	%	<b>&lt; 30</b>
Change in Tensile Strenght after (168 hours at 80 °C)	EN 60811	%	<b>&lt; 20</b>
Elongation at break after (240 hours-100° C)	EN 60811	%	<b>&gt; 125</b>
Change in Elongation at break after 240 hours at 100 °C	EN 60811	%	<b>&lt; 40</b>
Change in Elongation at break after (168 hours at 80 °C)	EN 60811	%	<b>&lt; 20</b>
Hot pressure test at 80 °C/k=0,6	EN 60811	%	<b>&lt; 50</b>
MFI (150° / 21,6 Kg)	ISO1133	g/10'	<b>5,2</b>
Bending test at -25 °C	EN 60811		<b>non break</b>
Cold impact at 150 °C	EN 60811		<b>non break</b>
Elongation at break (-25 °C)	EN 60811	%	<b>&gt; 30</b>

## Burning properties

LOI	UNE-EN ISO 4589	%	<b>40</b>
Halogenhidric Acid Emision	IEC 60754-1	%	<b>&lt; 0,1</b>
Corrosive gas in Smoke, pH	IEC 60754-2		<b>4,3</b>
Corrosive gas in Smoke. Conductivity	IEC 60754-2	µS/mm	<b>2,5</b>



## Recommended temperatures profile

Feeding	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Melt
130-150	130-150	140-160	140-160	150-170	150-170	160-170

## Additional information

### Packaging:

Storage: dry and cool place. The packaging should be kept closed to prevent moisture absorption. It may be necessary to dehumidify if the packaging is opened or if it has been stored for a long period of time

Masterbatch color: EVA or PE base

### Extrusion:

Standard extruders for thermoplastic materials. Low compression screw. L / D ratio: 24D-25D

Pre-drying: not necessary if storage recommendations are followed

### Benvic IBE S.L.

Carrer Besós 4-6

Teléfono

E-mail

08170 Montornés del Vallés

Barcelona (Spain)

935444385 Mov : 629374632

[juan.gonzalez-valero@benvic.com](mailto:juan.gonzalez-valero@benvic.com)

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