






Halogen-free, thermoplastic, highly flame retardant insulation and sheathing compound for low and medium voltage cables

<p>■ <b>Compound class</b> Insulation / sheathing</p> <p>■ <b>Standards</b> BS 6724 DIN EN 50363-7 TI 6, TI7 VDE 0207 part 24 HM2, HM4</p> <p>■ <b>Operating temperature [C°]</b> -30 to 90</p>	<p>■ <b>Compound category</b> <b>TP</b></p> <p>BS 7655 section 6.1 LTS 2 DIN EN 50363-8 TM7 VDE 0250 part 215 HM5</p> <p>■ <b>Oil resistance level</b> ★</p>	<p>■ <b>Flame retardant</b> ATH</p> <p>DIN VDE 0281 part 14 TI 6, TM 7 IEC 60092- 360 SHF 1 VDE 0276 part 604 HM 4</p>
<p>■ <b>Typical applications</b> <i>Halogen-free, low smoke, thermoplastic, highly flame retardant compound for the insulation and sheathing of low and medium voltage cables in General Installation applications.</i></p>		
 General Installation	 Shipboard	
<p>■ <b>Features</b></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  Flame retardant             </div> <div style="text-align: center;">  Halogen-free             </div> <div style="text-align: center;">  Low smoke             </div> </div>		

## PHYSICAL PROPERTIES

Physical properties	Unit	Typical value	Test method
Density*	g/cm <sup>3</sup>	<b>1.47</b>	DIN EN ISO 1183-1A
Hardness*	Shore D	<b>50</b>	DIN ISO 7619-1
Melt Flow Index (150°C; 21,6kg)	g/10 min	<b>9.9</b>	DIN EN ISO 1133

## MECHANICAL PROPERTIES \*\*

Thermoplastic	Unit	Typical value	Test method
Tensile strength	N/mm <sup>2</sup>	<b>12.5</b>	IEC 60811-501
Elongation at break	%	<b>190</b>	IEC 60811-501
Tear strength	N/mm	<b>8.2</b>	BS 6469:99.1
After ageing in air oven 168h at 100°C **	Unit	Typical value	Test method
Variation in tensile strength	%	<b>3.7</b>	IEC 60811-401
Variation in elongation at break	%	<b>6.2</b>	IEC 60811-401

■ After ageing in air oven 168h at 110°C **	Unit	Typical value	Test method
Variation in tensile strength	%	<b>6.5</b>	IEC 60811-401
Variation in elongation at break	%	<b>5.2</b>	IEC 60811-401

## THERMAL PROPERTIES \*\*

■ Heat tests	Unit	Typical value	Test method
Hot pressure test: penetration 6h at 90°C	%	<b>15</b>	IEC 60811-508

## RESISTANCE \*\*

■ IRM 902 4h at 70°C	Unit	Typical value	Test method
Variation in tensile strength	%	<b>-9.8</b>	IEC 60811-404
Variation in elongation at break	%	<b>-0.5</b>	IEC 60811-404
Variation in weight	%	<b>0</b>	IEC 60811-404
■ IRM 902 20h at 50°C	Unit	Typical value	Test method
Variation in tensile strength	%	<b>-9.9</b>	IEC 60811-404
Variation in elongation at break	%	<b>0.9</b>	IEC 60811-404
Variation in weight	%	<b>7</b>	IEC 60811-404

## BURNING PROPERTIES \*

■ Main burning properties	Unit	Typical value	Test method
LOI	%	<b>45</b>	ASTM D 2863 A
Halogen content	%	<b>0</b>	IEC 754-1
Caloric Value Hu	kJ/kg	<b>16560</b>	DIN 51900-2
■ Acid gas emission	Unit	Typical value	Test method
Corrosivity: pH	-	<b>5.94</b>	DIN EN 60754-2
Conductivity	µS/mm	<b>0.41</b>	DIN EN 60754-2
■ Flame Rating	Unit	Typical value	Test method
Vertical (2mm thickness)	-	<b>V1</b>	UL 94 V
Vertical (3mm thickness)	-	<b>V0</b>	UL 94 V

\* pressed plaques, 155°C / 5 min.

\*\* extruded tapes

## PROCESSING GUIDE

■ **Extruder Type**

Standard extruders for elastomeric or thermoplastic processing.

■ **Screw configuration**

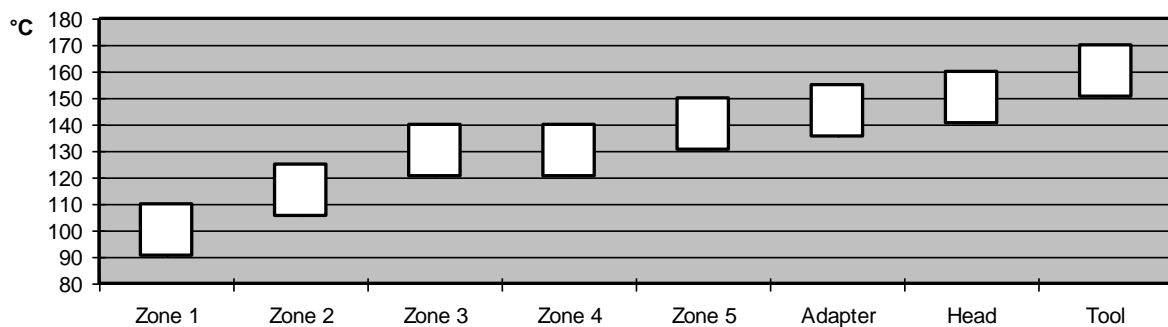
Low compression screw with L/D of 20 to 25 and compression ratio of 1:1.2

■ **Tooling**

pressure, semi-compression or tube possible

■ **Temperature profile extruder**

The profile shown below may vary slightly depending on extruder type, head design & output.



■ **Maximum mass temperature**

170 – 180°C

■ **Drying**

Predrying of Mecoline Compounds is normally not necessary provided the compound has been stored in sealed bags under cool (max. 30°C) and dry conditions.

If Mecoline Compounds are used from open bags, predrying 4–6h at a temperature of 60–70°C is recommended.

## STORAGE INFORMATION

■ **Form & packaging**

Pellets in sizes 2.8mm & 5.5mm  
Moisture-resistant bags (25kg) & octabins (alu-innerliner, max. 1250kg)

■ **Shelf life**

1 year after production

Note: The information given in this datasheet is believed to be accurate and reliable. However, no warranty, express or implied, or guarantee is given as to the suitability, accuracy, reliability or completeness of the information. This information does not hold us liable for damages or penalties resulting from following our suggestions or recommendations.