








## Irradiation cross-linkable, halogen-free, flame retardant compound

<p>■ <b>Compound class</b> Insulation / sheathing</p>	<p>■ <b>Compound category</b> </p>	<p>■ <b>Flame retardant</b> MDH</p>
<p>■ <b>Standards</b> DIN/VDE DKE AK 411.2.3</p>	<p>TÜV 2PFG 1169/08.2007</p>	
<p>■ <b>Operating temperature [C°]</b> -40 to 125</p>	<p>■ <b>Oil resistance level</b> ★★★</p>	
<p>■ <b>Typical applications</b> <i>A flame retardant, halogen-free and low smoke, oil resistant compound. Max. operating temperature 125°C.</i></p>		
		
<p>Green-Energy</p>		
<p>■ <b>Features</b></p>		
 Flame retardant	 Halogen-free	 Low smoke
 Oil resistant	 High temperature resistant	

## PHYSICAL PROPERTIES

Physical properties	Unit	Typical value	Test method
Density*	g/cm <sup>3</sup>	<b>1,38</b>	DIN EN ISO 1183-1A
Hardness*	Shore D	<b>45</b>	DIN ISO 48-4
Melt Flow Index (165°C; 21,6kg)	g/10 min	<b>8,0</b>	DIN EN ISO 1133

## MECHANICAL PROPERTIES

Before crosslinking **	Unit	Typical value	Test method
Tensile strength	N/mm <sup>2</sup>	<b>11,5</b>	IEC 60811-501
Elongation at break	%	<b>229</b>	IEC 60811-501
After crosslinking ***	Unit	Typical value	Test method
Tensile strength (80kGy)	N/mm <sup>2</sup>	<b>18,0</b>	IEC 60811-501
Elongation at break (80kGy)	%	<b>213</b>	IEC 60811-501
After ageing in air oven 1008h at 155°C ***	Unit	Typical value	Test method
Variation in tensile strength	%	<b>+20,0</b>	IEC 60811-401
Variation in elongation at break	%	<b>-21,1</b>	IEC 60811-401

■ After ageing in air oven 480h at 165°C ***	Unit	Typical value	Test method
Variation in tensile strength	%	<b>+11,1</b>	IEC 60811-401
Variation in elongation at break	%	<b>-24,9</b>	IEC 60811-401
■ After ageing in air oven 144h at 180°C ***	Unit	Typical value	Test method
Variation in tensile strength	%	<b>+5,9</b>	IEC 60811-401
Variation in elongation at break	%	<b>-20,2</b>	IEC 60811-401

## THERMAL PROPERTIES\*\*\*

■ Pressure test at high temperature	Unit	Typical value	Test method
Penetration 4h at 140°C	%	<b>8</b>	IEC 60811-508
■ Hot set test at 200°C / 15min / 0,2 MPa	Unit	Typical value	Test method
Elongation under load	%	<b>25</b>	IEC 60811-507
Elongation after unloading	%	<b>10</b>	IEC 60811-507
■ Hot set test at 250°C / 15min / 0,2 MPa	Unit	Typical value	Test method
Elongation under load	%	<b>50</b>	IEC 60811-507
Elongation after unloading	%	<b>15</b>	IEC 60811-507

## ELECTRICAL PROPERTIES\*

■ Major electrical properties	Unit	Typical value	Test method
Volume resistivity at 23°C / 500V	Ω cm	<b>3,5 x 10<sup>14</sup></b>	DIN IEC 60093
Volume resistivity at 90°C / 500V	Ω cm	<b>6,6 x 10<sup>11</sup></b>	DIN IEC 60093

## RESISTANCE \*\*\*

■ Fluid IRM 902 24h at 100°C	Unit	Typical value	Test method
Variation in tensile strength	%	<b>-19,1</b>	IEC 60811-404
Variation in elongation at break	%	<b>-28,0</b>	IEC 60811-404
Variation in weight	%	<b>+16,3</b>	IEC 60811-404
■ 1N NaOH 168h at 23°C	Unit	Typical value	Test method
Variation in tensile strength	%	<b>-8,9</b>	IEC 60811-404
Variation in elongation at break	%	<b>+11,3</b>	IEC 60811-404
■ 1N Oxalic acid 168h at 23°C	Unit	Typical value	Test method
Variation in tensile strength	%	<b>-15,0</b>	IEC 60811-404
Variation in elongation at break	%	<b>+11,7</b>	IEC 60811-404

## BURNING PROPERTIES\*

■ Main burning properties	Unit	Typical value	Test method
LOI	%	<b>30</b>	ASTM D 2863 A

\* pressed plaques

\*\* extruded tapes

\*\*\* cross-linked plaques or tapes

## PROCESSING GUIDE

■ **Screw configuration**

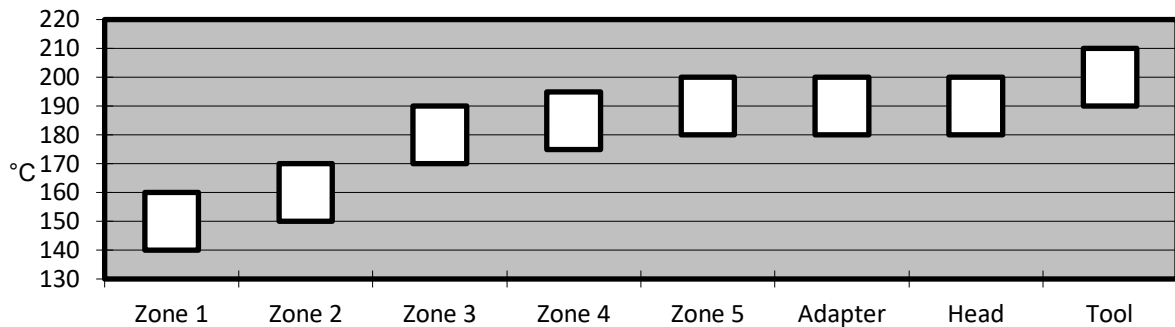
Low compression screw with L/D of 20 to 25 and compression ratio of 1:1.2.

■ **Extruder Type**

Standard extruders for elastomeric or thermoplastic processing.

■ **Tooling**

Pressure, semi-compression or tube possible.



■ **Maximum melt temperature**

190 - 200°C

■ **Drying**

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

If Mecoline compounds used from open bags, pre-drying 4–6 hours at a temperature of 60–70°C is recommended.

## STORAGE INFORMATION

■ **Form & packaging**

Pellets in sizes 2.8mm  
PE-bags (25kg), Octabins (1.000-2.000 kg), BigBags (max. 1.250 kg)

■ **Shelf life**

1 year after production

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