



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







<b>■ Compound class</b> Insulation	<b>■ Compound category</b> 	<b>■ Flame retardant</b> MDH
<b>■ Standards</b> UL 3266, 3271	CSA AWM I A/B	
<b>■ Operating temperature [C°]</b> -40 to 125	<b>■ Oil resistance level</b> ★	

**■ Typical applications**  
*This compound is an ideal choice for the insulation of heat-resistant wires and cables for applications in railway systems, nuclear power stations, engine compartments and other areas.*



General Applications

**■ Features**

 Flame retardant	 Halogen-free	 Low smoke
 High temperature Resistant	 Flexible	 Flexible at low temperatures

## PHYSICAL PROPERTIES

■ Physical properties	Unit	Typical value	Test method
Density*	g/cm <sup>3</sup>	<b>1.35</b>	DIN EN ISO 1183-1A
Hardness*	Shore D	<b>34</b>	DIN ISO 7619-1
Melt Flow Index (160°C; 10kg)	g/10 min	<b>8.0</b>	DIN EN ISO 1133

## MECHANICAL PROPERTIES

■ Thermoplastic / before crosslinking **	Unit	Typical value	Test method
Tensile strength	N/mm <sup>2</sup>	<b>9.0</b>	IEC 60811-501
Elongation at break	%	<b>750</b>	IEC 60811-501
■ After crosslinking ***	Unit	Typical value	Test method
Tensile strength (100kGy)	N/mm <sup>2</sup>	<b>14</b>	IEC 60811-501
Elongation at break (100kGy)	%	<b>400</b>	IEC 60811-501
■ After ageing in air oven 168h at 158°C ***	Unit	Typical value	Test method
Variation in tensile strength	%	<b>5</b>	IEC 60811-401
Variation in elongation at break	%	<b>-3</b>	IEC 60811-401

## THERMAL PROPERTIES\*\*\*

■ Low temperature tests	Unit	Typical value	Test method
Cold bend test at -15°C	-	<b>Pass</b>	IEC 60811-504
Brittleness temperature	°C	<b>-21</b>	ASTM D746-14
■ Hot set test at 200°C / 15min / 0,2MPa	Unit	Typical value	Test method
Elongation under load	%	<b>20</b>	IEC 60811-507
Residual elongation	%	<b>10</b>	IEC 60811-507

## ELECTRICAL PROPERTIES\*

■ Major electrical properties	Unit	Typical value	Test method
Dielectric constant (1 kHz, 20°C)	-	<b>3.9</b>	IEC 250

## BURNING PROPERTIES\*

■ Main burning properties	Unit	Typical value	Test method
LOI	%	<b>30</b>	ASTM D 2863 A
Halogen content	%	<b>0</b>	IEC 754-1
Temperature index	°C	<b>275</b>	ASTM D 2863 D
Toxicity index	-	<b>1</b>	EN 50305
■ Acid gas emission	Unit	Typical value	Test method
Corrosivity: pH (min.)	-	<b>4.8</b>	IEC 60754-2
Conductivity (max.)	µS/mm	<b>2</b>	IEC 60754-2

\* pressed plaques

\*\* extruded tapes

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

## Processing Guide

■ **Screw configuration**

Good results have been achieved with 'halogen-free', low compression screws and barrier type screws (BM) having high flights and L/D > 24:1

■ **Screw cooling**

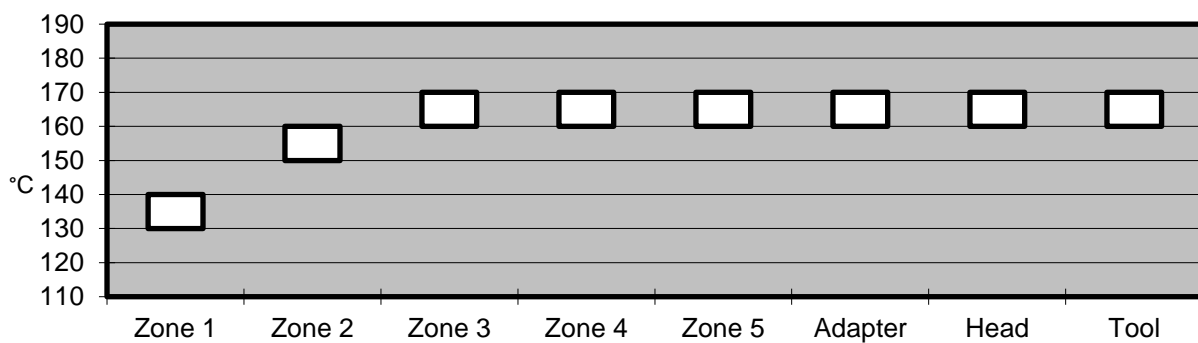
Not required

■ **Extrusion dies**

Pressure, semi-tube and tube tooling can be used, depending on size

■ **Temperature profile extruder**

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



■ **Maximum mass temperature**

220°C

■ **Wire/conductor**

Tin-plated (a version for use on bare copper is also available)

■ **Drying**

Pre-drying of Mecoline Compounds is normally not necessary provided that the compound has been stored in the original sealed bags under cool (max. 30°C) and dry conditions. Mecoline compounds used from open bags require pre-drying during 4–6 hours at 60°C–70°C

■ **Recommended colour master batches**

Well dispersed EVA master batch 0,5-1,0%. For black jacket applications, UV resistance can be obtained by adding a higher level of master batch depending on requirements and type of carbon black master batch used

## Crosslinking information

■ **Recommended radiation dose**

120-150 kGy

## Storage information

■ **Form & packaging**

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

■ **Shelf life**

1 year after production

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