
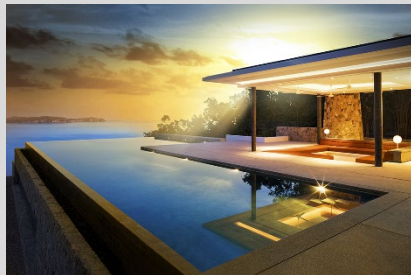


Halogen-free, thermoplastic, flame retardant insulation and sheathing compound for low and medium voltage cables.

<b>■ Compound class</b> Insulation / sheathing	<b>■ Compound category</b> 	<b>■ Flame retardant</b> ATH
<b>■ Standards</b> BS 6724 DIN EN 50363-7 TI 6, TI7 VDE 0207 part 24 HM2, HM4	BS 7655 section 6.1 LTS 2 DIN EN 50363-8 TM7 VDE 0250 part 215 HM5	DIN EN 50525-3-11 TI 6, TM 7 IEC 60092- 360 SHF 1 VDE 0276 part 604 HM 4
<b>■ Operating temperature [C°]</b> -30 to 90	<b>■ Oil resistance level</b> ★ ★	

**■ Typical applications**

Halogen-free, low smoke, thermoplastic, flame retardant compound for the sheathing and insulation of low and medium voltage cables in General Installation applications.



Installation



Shipboard



Telecomm., Optical Fibre, Coaxial

**■ Features**



Flame retardant



Halogen-free



Low smoke

## PHYSICAL PROPERTIES

■ Physical properties	Unit	Typical value	Test method
Density*	g/cm <sup>3</sup>	<b>1,58</b>	DIN EN ISO 1183-1A
Hardness*	Shore D	<b>55</b>	DIN ISO 48-4
Mooney viscosity, ML (1+4) 150°C	MU	<b>38</b>	DIN ISO 289-1
Melt Flow Index (150°C; 21,6kg)	g/10 min	<b>7,0</b>	DIN EN ISO 1133

## THERMAL PROPERTIES \*\*

■ Heat tests	Unit	Typical value	Test method
Hot pressure test: penetration 6h at 80°C	%	<b>1</b>	IEC 60811-508
Hot pressure test: penetration 6h at 90°C	%	<b>8</b>	IEC 60811-508

## ELECTRICAL PROPERTIES \*

■ Major electrical properties	Unit	Typical value	Test method
Volume resistivity at 23°C / 500V	Ω cm	<b>1,5 x 10<sup>12</sup></b>	DIN IEC 60093
Voltage resistance at 50 Hz / 23°C	kV/mm	<b>20,4</b>	IEC 60243-1
Dielectric constant at 23 °C/3 V/100 Hz	[ ]	<b>4,76</b>	IEC 60250 (1969)
Dielectric constant at 23 °C/3 V/1 MHz	[ ]	<b>3,99</b>	IEC 60250 (1969)

## MECHANICAL PROPERTIES \*\*

■ Thermoplastic	Unit	Typical value	Test method
Tensile strength	N/mm <sup>2</sup>	<b>11,0</b>	IEC 60811-501
Elongation at break	%	<b>186</b>	IEC 60811-501
■ After ageing in air oven 240h at 100°C	Unit	Typical value	Test method
Variation in tensile strength	%	<b>+5,5</b>	IEC 60811-401
Variation in elongation at break	%	<b>-2,7</b>	IEC 60811-401
■ After ageing in air oven 168h at 110°C	Unit	Typical value	Test method
Variation in tensile strength	%	<b>-10,0</b>	IEC 60811-401
Variation in elongation at break	%	<b>-3,8</b>	IEC 60811-401
■ After ageing in air oven 168h at 136°C	Unit	Typical value	Test method
Variation in tensile strength	%	<b>+6,5</b>	IEC 60811-401
Variation in elongation at break	%	<b>-10,1</b>	IEC 60811-401

## RESISTANCE \*\*

■ Fluid IRM 902 6h at 70°C	Unit	Typical value	Test method
Variation in tensile strength	%	<b>-33,6</b>	IEC 60811-404
Variation in elongation at break	%	<b>-11,3</b>	IEC 60811-404
■ Fluid IRM 902 20h at 50°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>6,0</b>	IEC 60811-404
■ Fluid IRM 902 72h at 50°C	Unit	Typical value	Test method
Variation in tensile strength	%	<b>-25,5</b>	IEC 60811-404
Variation in elongation at break	%	<b>-18,6</b>	IEC 60811-404
Variation in weight	%	<b>10,7</b>	IEC 60811-404

## BURNING PROPERTIES \*

■ Main burning properties	Unit	Typical value	Test method
LOI	%	<b>37</b>	ASTM D 2863 A
Temperature index	°C	<b>295</b>	NES 715

\* pressed plaques, 155°C / 5 min.

\*\* extruded tapes

## PROCESSING GUIDE

■ **Extruder Type**

Standard extruders for elastomeric or thermoplastic processing.

■ **Screw configuration**

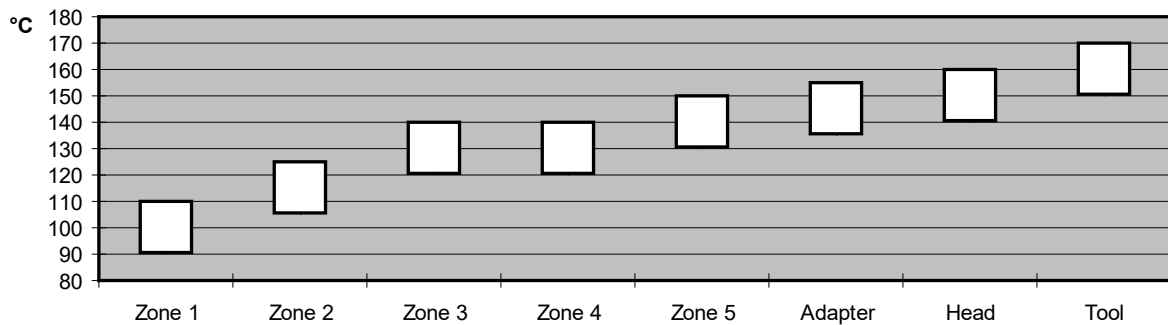
Low compression screw with L/D of 20 to 25 and compression ratio of 1:1.2

■ **Tooling**

For insulation pressure tools, for jacketing tube tools are recommended.  
Note: Pressure Tooling may have an effect on low temperature flexibility.

■ **Temperature profile extruder**

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



■ **Maximum mass temperature**

160 – 170°C

■ **Conductor pre-heating**

Pre-heating between 100°C-140°C to achieve maximum properties of elongation at break of the insulation.

■ **Drying**

Not necessary if the compound has been stored in original packing under cool (max. 30°C) and dry conditions. Mecoline compounds used from open packing require pre-drying during 4–6 hours at 60–70°C.

## 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 date of manufacturing

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