


Halogen-free, thermoplastic, flame retardant and flexible insulating and sheathing compound for low and medium voltage cables





<p>■ Compound class Insulation / Sheathing</p>	<p>■ Compound category TP</p>	<p>■ Flame retardant ATH</p>
<p>■ Standards BS 7655 LTS 1 & LTS 3 IEC 60092-360 SHF 1</p>	<p>DIN EN 50363-8 TM7 VDE 0207 part 24 HM 2</p>	<p>VDE 0250 part 215 HM 5 DIN EN 50525-3-11 TI 6</p>
<p>■ Operating temperature [C°] -40 to 80</p>	<p>■ Oil resistance level ★</p>	

■ **Typical applications**
Halogen-free, low smoke, thermoplastic, flame retardant compound for the sheathing of data communications, low and medium voltage cables in general Installations applications. This compound is flexible and features a high line speed and good processability.



Installation

■ **Features**

 Flame retardant	 Halogen-free	 Low smoke
 Flexible		

PHYSICAL PROPERTIES

Physical properties	Unit	Typical value	Test method
Density*	g/cm ³	1.47	DIN EN ISO 1183-1A
Hardness*	Shore D	47	DIN ISO 48-4
Melt Flow Index (150°C; 21,6kg)	g/10 min	8.5	DIN EN ISO 1133

MECHANICAL PROPERTIES**

Thermoplastic	Unit	Typical value	Test method
Tensile strength	N/mm ²	11	IEC 60811-501
Elongation at break	%	220	IEC 60811-501
Pulley flexing test	cycles	> 10.000	EN 50 396 cl. 6.2

■ After ageing in air oven 168h at 80°C ***	Unit	Typical value	Test method
Variation in tensile strength	%	+10.5	IEC 60811-401
Variation in elongation at break	%	-8.7	IEC 60811-401
■ After ageing in air oven 168h at 100°C ***	Unit	Typical value	Test method
Variation in tensile strength	%	+13.2	IEC 60811-401
Variation in elongation at break	%	-9.8	IEC 60811-401

THERMAL PROPERTIES **

■ Low temperature tests	Unit	Typical value	Test method
Elongation at break at -30°C	%	95	IEC 60811-505
Elongation at break at -40°C	%	56	IEC 60811-505
■ Heat tests	Unit	Typical value	Test method
Hot pressure test: penetration 6h at 80°C	%	18	IEC 60811-508

ELECTRICAL PROPERTIES*

■ Major electrical properties	Unit	Typical value	Test method
Volume resistivity (23°C, 100V)	Ω cm	1.02 x 10¹⁵	IEC 62631-3-1
Volume resistivity (90°C, 100V)	Ω cm	6.44 x 10¹³	IEC 62631-3-1

RESISTANCE **

■ Water purified 168h at 70°C	Unit	Typical value	Test method
Variation in tensile strength	%	-20.0	IEC 60811-404
Variation in elongation at break	%	-25.8	IEC 60811-404
Variation in weight	%	+1.0	IEC 60811-404

BURNING PROPERTIES*

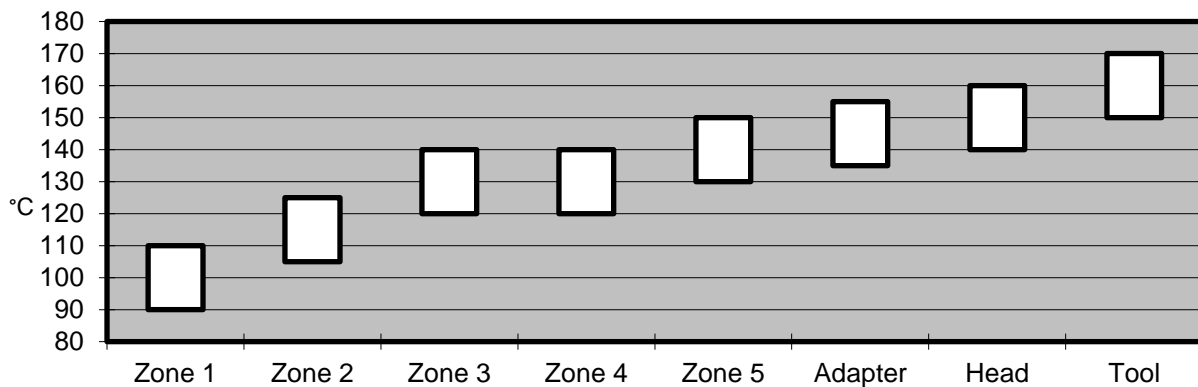
■ Main burning properties	Unit	Typical value	Test method
LOI	%	39	ASTM D 2863 A
Halogen acid gas content	mg/g	not detectable	DIN EN 60754-1
Toxicity index	-	3.18	EN 50305
■ Acid gas emission	Unit	Typical value	Test method
Corrosivity: pH (min.)	-	6.9	IEC 60754-2
Conductivity (max.)	μS/mm	2.6	IEC 60754-2

* pressed plaques, 155°C / 5 min

** extruded tapes

PROCESSING GUIDE

- **Extruder Type** Standard extruders for elastomeric or thermoplastic materials.
- **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** 160 – 170°C
- **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 size 2.8mm
Moisture-resistant bags (25kg) & octabins (alu-innerliner, max. 1250kg)
- **Shelf life** 1 year after date of manufacturing

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