



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




<p>■ Compound class Insulation / Sheathing</p> <p>■ Standards VDE 0207 part 24 HM 2, HM 4 IEC 60092-360 SHF 1 DIN EN 50363-7 T16, T17</p> <p>■ Operating temperature [°C] -30 to 90</p> <p>■ Typical applications <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 and shipboard.</i></p>	<p>■ Compound category TP</p> <p>BS 7655 section 6.1 LTS 1 - LTS 4 DIN VDE 0276-604 HM4 DIN EN 50363-8 TM7</p> <p>■ Oil resistance level ★</p>	<p>■ Flame retardant ATH</p> <p>CEI 20-11 M1 VDE 0250 part 215 HM5</p>
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Installation



Shipboard

 <p>Flame retardant</p>	 <p>Halogen-free</p>	 <p>Low smoke</p>
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PHYSICAL PROPERTIES

Physical properties	Unit	Typical value	Test method
Density*	g/cm ³	1,49	DIN EN ISO 1183-1A
Hardness*	Shore D	52	DIN ISO 48-4
Melt Flow Index (150°C; 21,6kg)	g/10 min	8,2	DIN EN ISO 1133
Mooney viscosity, ML (1+4) 140°C	MU	40	DIN ISO 289-1

MECHANICAL PROPERTIES **

Thermoplastic	Unit	Typical value	Test method
Tensile strength	N/mm ²	10,5	IEC 60811-501
Elongation at break	%	196	IEC 60811-501
Tear strength	N/mm	7,6	BS 6469:99.1
After ageing in air oven 168h at 110°C	Unit	Typical value	Test method
Variation in tensile strength	%	-2,0	IEC 60811-401
Variation in elongation at break	%	-9,7	IEC 60811-401

THERMAL PROPERTIES **

■ Heat tests	Unit	Typical value	Test method
Hot pressure test: Penetration 6h at 90°C	%	32	IEC 60811-508

RESISTANCE **

■ IRM 902 4h at 70°C	Unit	Typical value	Test method
Variation in tensile strength	%	-6,1	IEC 60811-404
Variation in elongation at break	%	6,4	IEC 60811-404
Variation in weight	%	6,0	IEC 60811-404
■ Water purified 168h at 70°C	Unit	Typical value	Test method
Variation in tensile strength	%	-8,4	IEC 60811-404
Variation in elongation at break	%	-26,7	IEC 60811-404
Variation in weight	%	1,0	IEC 60811-404

BURNING PROPERTIES *

■ Main burning properties	Unit	Typical value	Test method
LOI *	%	38	ASTM D 2863 A
■ Acid gas emission	Unit	Typical value	Test method
Corrosivity: pH (min.)	-	≥ 4,5	IEC 60754-2
Conductivity (max.)	μS/mm	≤ 10	IEC 60754-2

* pressed plaques, 155°C / 5 min.

** extruded tapes

PROCESSING GUIDE

■ **Extruder Type**

Standard extruders for elastomeric or thermoplastic processing

■ **Screw configuration**

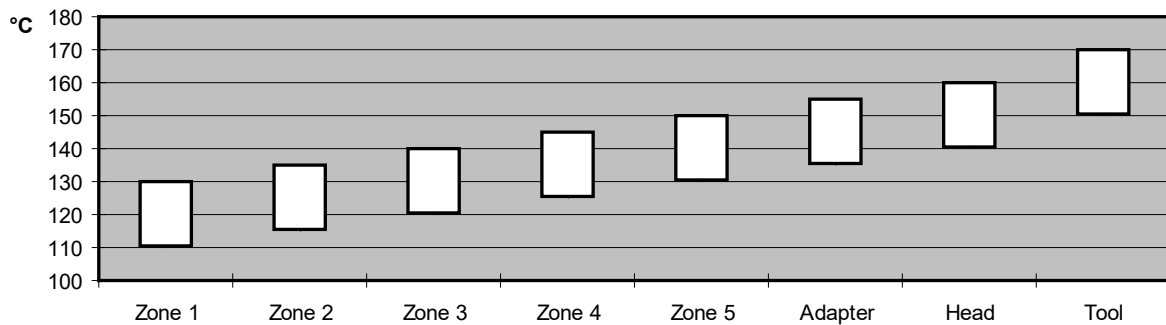
Low compression screw with L/D of 20 to 25 and compression ratio of 1:1.2

■ **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**

165 – 175°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 sizes 2.8mm & 5.5mm
Moisture-resistant bags (25kg) & octabins (alu-innerliner, max. 1250kg)

■ **Shelf life**

1 year after production

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