







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

<p>■ Compound class Sheathing</p>	<p>■ Compound category TP</p>	<p>■ Flame retardant ATH</p>
<p>■ Standards BS 6724 DIN EN 50363-8 TM7 IEC 60092-360 SHF 1 VDE 0250 part 215 HM5</p>	<p>BS 7655 section 6.1 LTS 2 DIN VDE 0276-604 HM4 NF C 32-323</p>	<p>CEI 20-11 M1 DIN VDE 0281 part 14 TM7 VDE 0207 part 24 HM 2, HM 4</p>
<p>■ Operating temperature [C°] -25 to 90</p>	<p>■ Oil resistance level ★★</p>	
<p>■ Typical applications <i>Halogen-free, low smoke, thermoplastic, highly flame retardant compound for the sheathing of data communications, low and medium voltage cables in General Installation applications.</i></p>		
 <p>Installation</p>	 <p>Shipboard</p>	 <p>Telecomm., Optical Fibre, Coaxial</p>
<p>■ Features</p>		
 <p>Flame retardant</p>	 <p>Halogen-free</p>	 <p>Low smoke</p>

PHYSICAL PROPERTIES

Physical properties	Unit	Typical value	Test method
Density*	g/cm ³	1,56	DIN EN ISO 1183-1A
Hardness*	Shore D	50	DIN ISO 7619-1
Melt Flow Index (160°C; 21,6kg)	g/10 min	5,0	DIN EN ISO 1133

MECHANICAL PROPERTIES **

Thermoplastic	Unit	Typical value	Test method
Tensile strength	N/mm ²	10,3	IEC 60811-501
Elongation at break	%	179	IEC 60811-501
Tear strength	N/mm ²	7,6	BS 6469:99.1
After ageing in air oven 240h at 100°C	Unit	Typical value	Test method
Variation in tensile strength	%	-9,7	IEC 60811-401
Variation in elongation at break	%	+10,6	IEC 60811-401

■ After ageing in air oven 168h at 120°C	Unit	Typical value	Test method
Variation in tensile strength	%	+1,9	IEC 60811-401
Variation in elongation at break	%	+11,2	IEC 60811-401

THERMAL PROPERTIES **

■ Low temperature tests	Unit	Typical value	Test method
Brittleness temperature	°C	-20	ASTM D 746
Elongation at break at -15°C	%	79	IEC 60811-505
■ Heat tests	Unit	Typical value	Test method
Hot pressure test: Penetration 6h at 90°C	%	27	IEC 60811-508
Heat shock 1h at 150°C		Pass	IEC 60811-509

ELECTRICAL PROPERTIES *

■ Major electrical properties	Unit	Typical value	Test method
Volume resistivity (23°C / 500V)	Ω m	5,6x10¹¹	DIN IEC 60093
Surface resistivity (16h at 20°C / 500V)	Ω	≥ 10¹²	DIN VDE 0303-31
Dielectric strength	kV/mm	27,6	IEC 60243-1

RESISTANCE **

■ Fluid IRM 902 4h at 70°C	Unit	Typical value	Test method
Variation in tensile strength	%	-13,5	IEC 60811-404
Variation in elongation at break	%	+4,4	IEC 60811-404
Variation in weight	%	+9,0	IEC 60811-404
■ H ₂ SO ₄ 38% 168h at 23°C	Unit	Typical value	Test method
Variation in tensile strength	%	-15,1	IEC 60811-404
Variation in elongation at break	%	-8,9	IEC 60811-404
Variation in weight	%	+17,0	IEC 60811-404

BURNING PROPERTIES *

■ Main burning properties	Unit	Typical value	Test method
LOI *	%	45	ASTM D 2863 A
Temperature index	°C	280	ASTM D 2863 D
Amount of halogen acid gas	mg/g	<5	IEC 60754-1
Non-Halogen Verification	-	0,01	DIN VDE 0472-815
■ Acid gas emission	Unit	Typical value	Test method
Corrosivity: pH (min.)	-	≥ 4,5	IEC 60754-2
Conductivity (max.)	μS/mm	≤ 10	IEC 60754-2
■ Flame Rating	Unit	Typical value	Test method
Vertical (2mm thickness)	-	V0	UL 94 V
Vertical (3mm thickness)	-	V0	UL 94 V

* pressed plaques, 155°C / 5 min.

** extruded tapes

PROCESSING GUIDE

■ **Extruder Type**

Standard extruders for elastomeric or thermoplastic processing

■ **Screw configuration**

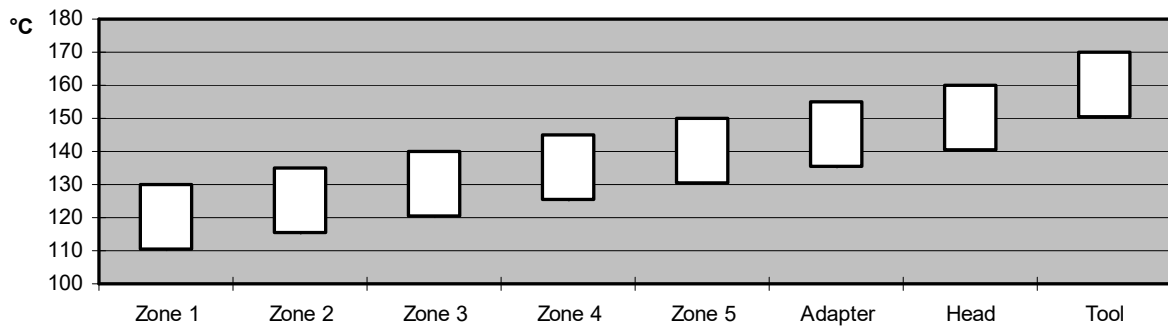
Low compression screw with L/D of 20 to 25 and compression ratio of 1:1.2

■ **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**

155 – 165°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

Note: The information given in this datasheet is believed to be accurate and reliable. However, no warranty, express or implied, or guarantee is given as to the suitability, accuracy, reliability or completeness of the information. This information does not hold us liable for damages or penalties resulting from following our suggestions or recommendations.