






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

<p>■ Compound class Insulation / sheathing</p> <p>■ Standards BS 6724 DIN EN 50363-7 TI 6, TI7 VDE 0207 part 24 HM2, HM4</p> <p>■ Operating temperature [C°] -30 to 90</p>	<p>■ Compound category TP</p> <p>BS 7655 section 6.1 LTS 2 DIN EN 50363-8 TM7 VDE 0250 part 215 HM5</p> <p>■ Oil resistance level ★</p>	<p>■ Flame retardant ATH</p> <p>DIN EN 50525-3-11 TI 6, TM 7 IEC 60092- 360 SHF 1 VDE 0276 part 604 HM 4</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.</i></p>		
 General Installation	 Shipboard	
<p>■ Features</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  Flame retardant </div> <div style="text-align: center;">  Halogen-free </div> <div style="text-align: center;">  Low smoke </div> </div>		

PHYSICAL PROPERTIES

■ Physical properties	Unit	Typical value	Test method
Density*	g/cm ³	1.47	DIN EN ISO 1183-1A
Hardness*	Shore D	50	DIN ISO 48-4
Melt Flow Index (150°C; 21,6kg)	g/10 min	9.9	DIN EN ISO 1133

MECHANICAL PROPERTIES **

■ Thermoplastic	Unit	Typical value	Test method
Tensile strength	N/mm ²	12.5	IEC 60811-501
Elongation at break	%	190	IEC 60811-501
Tear strength	N/mm	8.2	BS 6469:99.1
■ After ageing in air oven 168h at 100°C **	Unit	Typical value	Test method
Variation in tensile strength	%	3.7	IEC 60811-401
Variation in elongation at break	%	6.2	IEC 60811-401

■ After ageing in air oven 168h at 110°C **	Unit	Typical value	Test method
Variation in tensile strength	%	6.5	IEC 60811-401
Variation in elongation at break	%	5.2	IEC 60811-401
■ After ageing in air oven 240h at 120°C **	Unit	Typical value	Test method
Variation in tensile strength	%	8.4	IEC 60811-401
Variation in elongation at break	%	-21.7	IEC 60811-401

THERMAL PROPERTIES **

■ Heat tests	Unit	Typical value	Test method
Hot pressure test: penetration 6h at 90°C	%	15	IEC 60811-508

RESISTANCE **

■ IRM 902 4h at 70°C	Unit	Typical value	Test method
Variation in tensile strength	%	-9.8	IEC 60811-404
Variation in elongation at break	%	-0.5	IEC 60811-404
Variation in weight	%	0	IEC 60811-404
■ IRM 902 20h at 50°C	Unit	Typical value	Test method
Variation in tensile strength	%	-9.9	IEC 60811-404
Variation in elongation at break	%	0.9	IEC 60811-404
Variation in weight	%	7	IEC 60811-404

BURNING PROPERTIES *

■ Main burning properties	Unit	Typical value	Test method
LOI	%	45	ASTM D 2863 A
Halogen content	%	0	IEC 754-1
Caloric Value Hu	kJ/kg	16560	DIN 51900-2
■ Acid gas emission	Unit	Typical value	Test method
Corrosivity: pH	-	5.94	DIN EN 60754-2
Conductivity	μS/mm	0.41	DIN EN 60754-2
■ Flame Rating	Unit	Typical value	Test method
Vertical (2mm thickness)	-	V1	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**

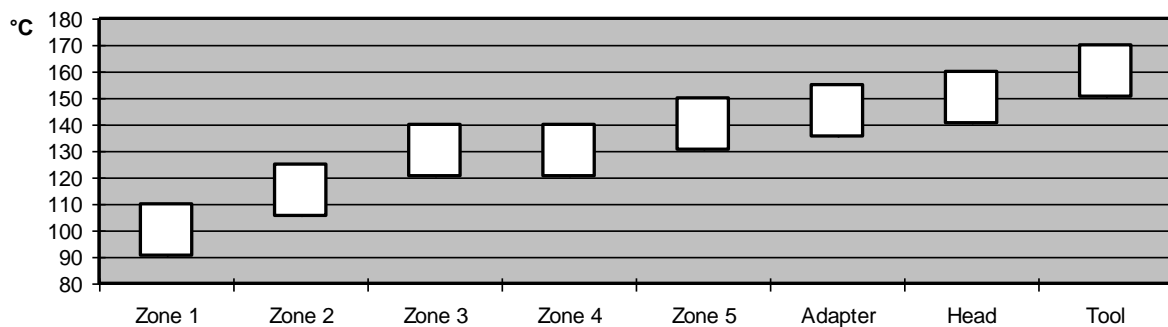
Low compression screw with L/D of 20 to 25 and compression ratio of 1:1.2

■ **Tooling**

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**

170 – 180°C

■ **Drying**

Predrying of Mecoline Compounds is normally not necessary provided the compound has been stored in sealed bags under cool (max. 30°C) and dry conditions.

If Mecoline Compounds are used from open bags, predrying 4–6h at a temperature of 60–70°C is recommended.

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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