


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

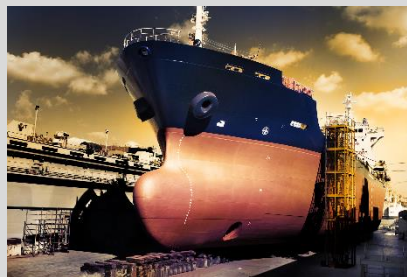
■ Compound class Insulation / sheathing	■ Compound category 	■ Flame retardant ATH
■ Standards BS 6724 DIN EN 50363-7 TI 6, TI7 VDE 0207 part 24 HM2, HM4	BS 7655 section 6.1 LTS 2 DIN EN 50363-8 TM7 VDE 0250 part 215 HM5	DIN VDE 0281 part 14 TI 6, TM 7 IEC 60092- 360 SHF 1 VDE 0276 part 604 HM 4
■ Operating temperature [C°] -30 to 90	■ Oil resistance level ★ ★	

■ 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 ³	1,58	DIN EN ISO 1183-1A
Hardness*	Shore D	55	DIN ISO 7619-1
Mooney viscosity, ML (1+4) 150°C	MU	38	DIN 53 523
Melt Flow Index (150°C; 21,6kg)	g/10 min	7,0	DIN EN ISO 1133

THERMAL PROPERTIES **

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

ELECTRICAL PROPERTIES *

■ Major electrical properties	Unit	Typical value	Test method
Volume resistivity at 23°C / 500V	Ω cm	1,5 x 10¹²	DIN IEC 60093
Voltage resistance at 50 Hz / 23°C	kV/mm	20,4	IEC 60243-1
Dielectric strength	kV/mm	21,6	IEC 60243-1

MECHANICAL PROPERTIES **

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

RESISTANCE **

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

BURNING PROPERTIES *

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

* pressed plaques, 155°C / 5 min.

** extruded tapes

PROCESSING GUIDE

■ **Extruder Type**

Standard extruders for elastomeric or thermoplastic processing.

■ **Screw configuration**

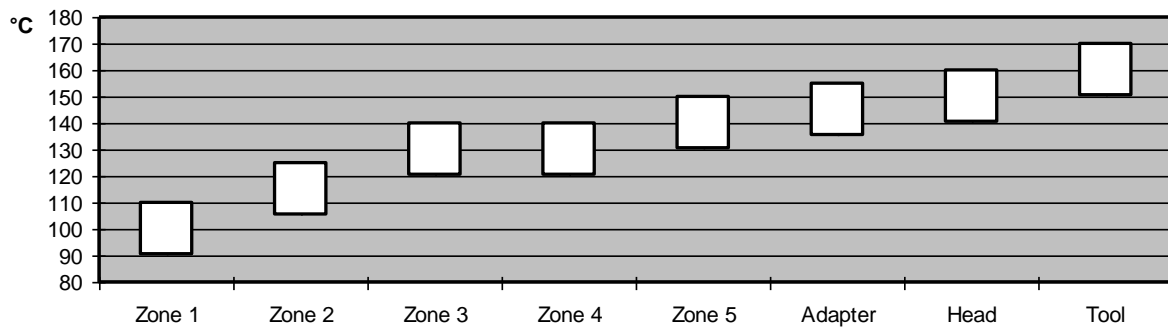
Low compression screw with L/D of 20 to 25 and compression ratio of 1:1.2

■ **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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