
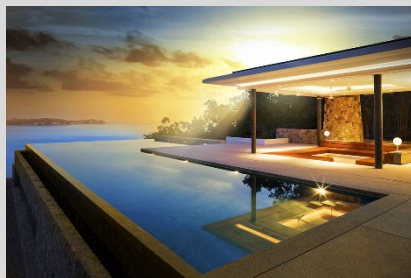


Halogen-free, thermoplastic, highly flame retardant sheathing compound for low and medium voltage cables

■ Compound class Sheathing	■ Compound category  TP	■ Flame retardant ATH
■ Standards BS 6724 DIN EN 50363-8 TM7 IEC 60092-360 SHF 1 VDE 0250 part 215 HM5	BS 7655 section 6.1 LTS 1 - LTS 4 DIN VDE 0276-604 HM4 NF C 32-323	CEI 20-11 M1 DIN EN 50525-3-11 TM7 VDE 0207 part 24 HM 2, HM 4
■ Operating temperature [C°] -25 to 90	■ Oil resistance level ★★	

■ Typical applications

Halogen-free, low smoke, thermoplastic, highly flame retardant compound for the sheathing of low and medium voltage cables in General Installation applications.



Installation

■ Features



Flame retardant



Halogen-free



Low smoke



Tear resistant



Abrasion resistant

PHYSICAL PROPERTIES

■ Physical properties	Unit	Typical value	Test method
Density*	g/cm ³	1,49	DIN EN ISO 1183-1A
Hardness*	Shore D	55	DIN ISO 48-4
Melt Flow Index (150°C; 21,6kg)	g/10 min	11,5	DIN EN ISO 1133
Abrasion*	mm ³	94	DIN VDE 0472-605
■ Water absorption **	Unit	Typical value	Test method
Water absorption after 24h at 70°C	mg/cm ²	1,62	IEC 60811-402

MECHANICAL PROPERTIES

■ Thermoplastic **	Unit	Typical value	Test method
Tensile strength	N/mm ²	13,8	IEC 60811-501
Elongation at break	%	205	IEC 60811-501
Tear strength	N/mm	10,5	BS 6469:99.1

■ After ageing in air oven 168h at 120°C **	Unit	Typical value	Test method
Variation in tensile strength	%	+9,4	IEC 60811-401
Variation in elongation at break	%	-4,4	IEC 60811-401
■ After ageing in air oven 240h at 100°C **	Unit	Typical value	Test method
Variation in tensile strength	%	-5,8	IEC 60811-401
Variation in elongation at break	%	+2,4	IEC 60811-401

THERMAL PROPERTIES **

■ Heat tests	Unit	Typical value	Test method
Hot pressure test: penetration 6h at 80°C	%	3	IEC 60811-508
Hot pressure test: penetration 6h at 90°C	%	13	IEC 60811-508
Shrinkage at 70°C	%	Pass	IEC 60811-508
■ Low temperature tests	Unit	Typical value	Test method
Impact strength at -25°C	-	Pass	IEC 60811-506

ELECTRICAL PROPERTIES *

■ Major electrical properties	Unit	Typical value	Test method
Volume resistivity (16h at 20°C, 500V)	Ω cm	7,8 x 10¹³	DIN VDE 0303-30
Dielectric constant (23°C, 100V, 50Hz)	-	5,44	IEC 60250
Dielectric constant (23°C, 1V, 1kHz)	-	5,04	IEC 60250
Dielectric constant (23°C, 1V, 1MHz)	-	3,96	IEC 60250

RESISTANCE **

■ Fluid IRM 902 6h at 100°C	Unit	Typical value	Test method
Variation in tensile strength	%	-10,9	IEC 60811-404
Variation in elongation at break	%	+2,4	IEC 60811-404
■ Fluid IRM 902 168h at 100°C	Unit	Typical value	Test method
Variation in tensile strength	%	-65,0	IEC 60811-404
Variation in elongation at break	%	-60,0	IEC 60811-404
■ Water purified 24h at 23°C	Unit	Typical value	Test method
Variation in tensile strength	%	-3,0	IEC 60811-404
Variation in elongation at break	%	-1,4	IEC 60811-404
Absorption	mg/cm ³	0,13	IEC 60811-404
Absorption	%	0,15	IEC 60811-404
■ Water purified 168h at 70°C	Unit	Typical value	Test method
Variation in tensile strength	%	-11,8	IEC 60811-404
Variation in elongation at break	%	-11,7	IEC 60811-404

BURNING PROPERTIES *

■ Main burning properties	Unit	Typical value	Test method
LOI	%	36	ASTM D 2863 A
Temperature index	°C	295	ASTM D 2863 D
Toxicity index (max.)	-	1,1	NES 713
■ Acid gas emission	Unit	Typical value	Test method
Corrosivity: pH (min.)	-	6,5	IEC 60754-2
Conductivity (max.)	μS/cm ⁻¹	14	IEC 60754-2
■ NBS-smoke chamber test	Unit	Typical value	Test method
DS max. (non-flaming)		15	ASTM 662
Time to DS max.	m:s	05:53	ASTM E 662
DS max. (non-flaming)		208	ASTM 662
Time to DS max.	m:s	09:11	ASTM E 662

* pressed plaques, 155°C / 5 min.

** extruded tapes

PROCESSING GUIDE

■ **Extruder Type**

Standard extruders for elastomeric or thermoplastic processing.

■ **Screw configuration**

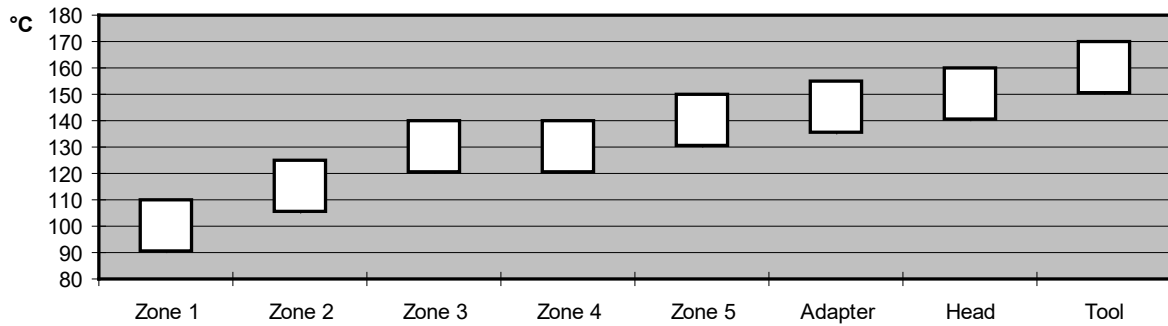
Low compression screw with L/D of 20 to 25 and compression ratio of 1:1.2

■ **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**

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 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.

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