


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




| | | |
|--|---|---|
| <p>■ Compound class Sheathing</p> | <p>■ Compound category TP</p> | <p>■ Flame retardant ATH</p> |
| <p>■ Standards VDE 0207 part 24 HM 2</p> | <p>VDE 0250 part 215 HM 5</p> | <p>IEC 60092-360 SHF 1</p> |
| <p>■ Operating temperature [C°] -25 to 80</p> | <p>■ Oil resistance level ★</p> | |

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



Installation

■ **Features**

| | | |
|---|--|---|
|  Flame retardant |  Halogen-free |  Low smoke |
|---|--|---|

PHYSICAL PROPERTIES

| Physical properties | Unit | Typical value | Test method |
|---------------------------------|-------------------|---------------|--------------------|
| Density* | g/cm ³ | 1,55 | DIN EN ISO 1183-1A |
| Hardness* | Shore D | 47 | DIN ISO 7619-1 |
| Melt Flow Index (160°C; 21,6kg) | g/10 min | 3,2 | DIN EN ISO 1133 |

MECHANICAL PROPERTIES **

| Thermoplastic | Unit | Typical value | Test method |
|--|-------------------|---------------|---------------|
| Tensile strength | N/mm ² | 9,2 | IEC 60811-501 |
| Elongation at break | % | 195 | IEC 60811-501 |
| ■ After ageing in air oven 168h at 100°C *** | | | |
| Variation in tensile strength | % | +14,1 | IEC 60811-401 |
| Variation in elongation at break | % | -25,1 | IEC 60811-401 |
| ■ After ageing in air oven 336h at 100°C *** | | | |
| Variation in tensile strength | % | +12,0 | IEC 60811-401 |
| Variation in elongation at break | % | -19,0 | IEC 60811-401 |

THERMAL PROPERTIES **

| ■ Heat tests | Unit | Typical value | Test method |
|---|------|---------------|---------------|
| Hot pressure test: penetration 6h at 80°C | % | 40 | IEC 60811-508 |

ELECTRICAL PROPERTIES *

| ■ Major electrical properties | Unit | Typical value | Test method |
|-----------------------------------|-------|------------------------------|---------------|
| Volume resistivity at 23°C / 500V | Ω cm | 5,6 x 10¹¹ | DIN IEC 60093 |
| Dielectric strength | kV/mm | 27,6 | IEC 60243-1 |

BURNING PROPERTIES *

| ■ Main burning properties | Unit | Typical value | Test method |
|---------------------------|-------|---------------|---------------|
| LOI * | % | 41 | ASTM D 2863 A |
| Temperature index | °C | 290 | ASTM D 2863 D |
| ■ 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**

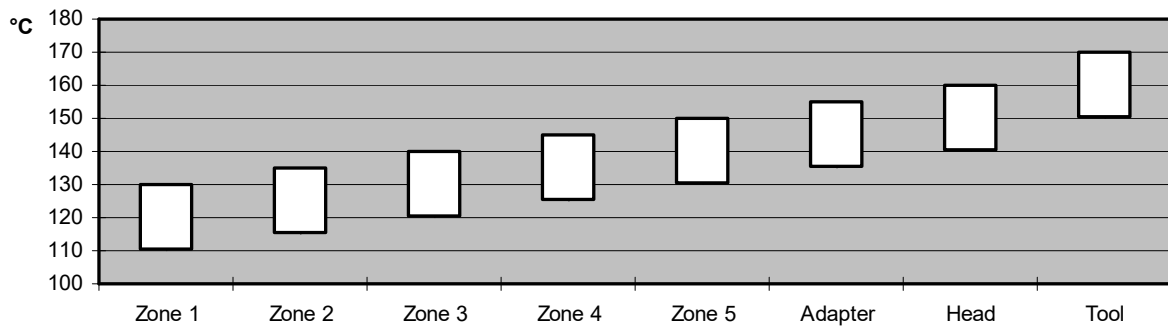
Low compression screw with L/D of 20 to 25 and compression ratio of 1:1.2

■ **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 date of manufacturing

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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