

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

#### ■ Compound class

Sheathing

#### ■ Compound category

TP

#### ■ Flame retardant

ATH

#### ■ Standards

DIN EN 50363-8 TM7

IEC 60092-360 SHF 1

UL 1277 Oil Res I

DIN VDE 0276-604 HM4

VDE 0207 part 24 HM2, HM4

UL 1277 Oil Res II

DIN VDE 0281 part 14 TM7

VDE 0250 part 215 HM5

IEC 60502-1 ST8

#### ■ Operating temperature [C°]

-70 to 105

#### ■ Oil resistance level

★★★★★

#### ■ Typical applications

Halogen-free, low smoke, thermoplastic, highly oil and extra fuel resistant, flame retardant compound for the sheathing of low and medium voltage cables for moving applications. (e. g. Green Energy/Offshore)



Shipboard



Green Energy

#### ■ Features



Flame retardant



Halogen-free



Low smoke



Flexible



Flexible at low temperatures



Oil resistant



Weather / UV resistant

## PHYSICAL PROPERTIES\*

| ■ Physical properties           | Unit              | Typical value | Test method        |
|---------------------------------|-------------------|---------------|--------------------|
| Density                         | g/cm <sup>3</sup> | <b>1.61</b>   | DIN EN ISO 1183-1A |
| Hardness                        | Shore A           | <b>83</b>     | DIN ISO 7619-1     |
| Melt Flow Index (190°C; 21.6kg) | g/10 min          | <b>7.5</b>    | DIN EN ISO 1133    |

## MECHANICAL PROPERTIES\*\*

| ■ Thermoplastic     | Unit              | Typical value | Test method   |
|---------------------|-------------------|---------------|---------------|
| Tensile strength    | N/mm <sup>2</sup> | <b>10.5</b>   | IEC 60811-501 |
| Elongation at break | %                 | <b>250</b>    | IEC 60811-501 |

**RESISTANCE \*\***

| ■ UV weathering – ISO 4892-2 720h | Unit | Typical value | Test method   |
|-----------------------------------|------|---------------|---------------|
| Variation in tensile strength     | %    | <b>+9.6</b>   | IEC 60811-401 |
| Variation in elongation at break  | %    | <b>-9.5</b>   | IEC 60811-401 |

**BURNING PROPERTIES \***

| ■ Main burning properties | Unit  | Typical value         | Test method    |
|---------------------------|-------|-----------------------|----------------|
| LOI                       | %     | <b>37</b>             | ASTM D 2863 A  |
| Halogen acid gas content  | mg/g  | <b>not detectable</b> | DIN EN 60754-1 |
| Toxicity index            | -     | <b>4.78</b>           | EN 50305       |
| ■ Acid gas emission       | Unit  | Typical value         | Test method    |
| Corrosivity: pH (min.)    | -     | <b>7.1</b>            | IEC 60754-2    |
| Conductivity (max.)       | µS/mm | <b>5.8</b>            | IEC 60754-2    |

\* pressed plaques, 165°C / 5 min.

\*\* extruded tapes

## PROCESSING GUIDE

### ■ Extruder Type

Standard extruders for elastomeric or thermoplastic processing.

### ■ Screw configuration

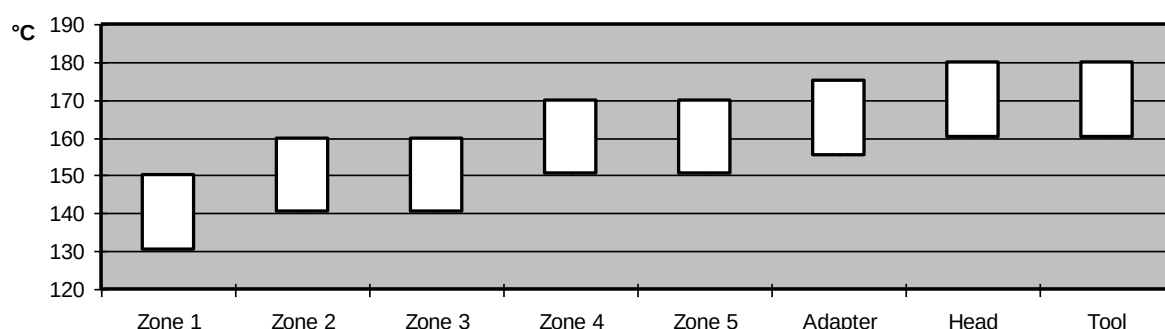
Low compression screw with L/D of 20 to 25 and compression ratio of 1:1.2

### ■ 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

170 – 180°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 size 2.8mm  
Moisture-resistant bags (25kg) & octabins (alu-innerliner, max. 1250kg)

### ■ Shelf life

1 year after date of manufacturing

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