

RavaSafe® ZH-LSF 251 is a thermoplastic zero halogen, low smoke flame retardant compound designed for general purpose insulation and sheathing applications.

This compound combines excellent good processing, good mechanical properties and lower water absorption.

Typical Application: Telecom, LV power cable application

Standard norms (type of material) : EN 50363 (TI7, TM7), VDE 0207 / 0250 (HM2, HM4, HI2) , BS 7655 (LTS1 , LTS2, LTS3, LTS4) , IEC 60502 (ST8) and IEC 60092-360 (SHF1)

Technical properties:

| Physical and Mechanical Properties | Typical Value | Units (SI) | Test Method |
|--|---------------|------------|------------------------|
| Density, 23°C | 1,51 | g/cm³ | ISO 1183-1 (ASTM D792) |
| Melt flow index (150°C /21,6kg) | 5,2 | g/10 min | ISO 1133 (b) |
| Hardness (15 seconds) | 43 | Shore D | ISO R 868 (ASTM D2240) |
| Water immersion test (7d @ 70°C) | 0,33 | mg/cm² | IEC 60811-402 |
| Tear strength at 23°C | 5,2 | N/mm | BS 6469-99.1 |
| Unaged mechanical properties (200 mm/min) | | | |
| Tensile strength | 13 | MPa | IEC 60811-501 |
| Elongation at break | 165 | % | |
| Thermal ageing 7 days at 120°C | | | |
| Tensile strength variation (Δ) | -2 | % | IEC 60811-501 |
| Elongation at break variation (Δ) | -20 | % | |
| Thermo Mechanical Properties | | | |
| Thermal Crack Resistance (80°C) | Pass | - | Internal Method |
| Shrinkage (1h @ 80°C) | <0,1 | % | IEC 60811-502/503 |
| Hot Pressure Deformation (6h @ 90°C) | 22,4 | % | IEC 60811-508 |
| Elongation at break (-40°C) | >20 | % | IEC 60811-505 |
| Cold Bending Test (-40°C) | Pass | - | Internal Method |
| Water Absorption 7d at 70°C | | | |
| Tensile strength variation (Δ) | -8 | % | BS 7655-6.1 |
| Elongation at break variation (Δ) | -9 | % | |
| Oil resistance test 4h at 70°C (IRM 902 – immersion) | | | |
| Tensile strength variation (Δ) | -30 | % | IEC 60811-404 |
| Elongation at break variation (Δ) | -10 | % | |

| Flammability | Typical Value | Units (SI) | Test Method |
|-------------------|---------------|------------|--|
| Oxygen Index | 40 | % | ISO 4589-2 (ASTM D2863) IEC 60754-1 |
| Halogen content | < 0,5 | % | |
| Acid gas emission | | | |
| pH | > 4,3 | / | IEC 60754-2 |
| Conductivity | < 2,5 | µS/mm | IEC 60754-1 |

Recommended extrusion profile:

| Extrusion Temperatures | Zones | | | | | | | |
|------------------------|-------|-------|-------|-------|-------|--------|-------|-------|
| | Z1 | Z2 | Z3 | Z4 | Z5 | Collar | Head | Die |
| Temperature (Imperial) | 266°F | 284°F | 302°F | 320°F | 320°F | 329°F | 338°F | 338°F |
| Temperature (SI) | 130°C | 140°C | 150°C | 160°C | 160°C | 165°C | 170°C | 170°C |

RavaSafe® ZH-LSF 251 is a product able to run on standard extruders, based on low compression screw and head. This compound is supplied in aluminum foil bags. Pre-drying is not required before extrusion process.

RavaSafe® ZH-LSF 251 is colorable. A full range of specific color masterbatches (RAVACOLOR™) and additive masterbatches (RAVABOOST™) are available.

For any further information, please contact Ravago W&C.

The material description is subject to changes during the validation period of the product.

This product information is based on our general experience and does not constitute a specification. Since many factors affect the use of our products, no warranty is given or implied with respect to this information or patent infringement. We do not accept liability for any loss or damage arising from the use of this information. All sales are subject to our Standard Terms and Conditions of Sale.