

RavaSafe® ZH-LSF 2 UV is a thermoplastic zero halogen, low smoke flame retardant compound designed for general purpose insulation and sheathing application.

This compound combines excellent processing and good mechanical properties with UV stabilization.

Typical Application: Telecom, Low and Medium power cable application

Standard norms (type of material) : EN 50363 (TI7, TM7), VDE 0207 / 0250 (HM2, HM4, HI2), BS 7655 (LTS 2), IEC 60502 (ST8) and IEC 60092-360 (SHF1)

Technical properties:

| Physical and Mechanical Properties | Typical Value | Units (SI) | Test Method |
|--|---------------|------------|------------------------|
| Density, 23°C | 1,53 | g/cm³ | ISO 1183-1 (ASTM D792) |
| Melt flow index (150°C /21,6kg) | 8 | g/10 min | ISO 1133 (b) |
| Hardness (15 seconds) | 49 | Shore D | ISO R 868 (ASTM D2240) |
| Water immersion test (7d @ 70°C) | 1,4 | mg/cm² | IEC 60811-402 |
| Tear strength 23°C | 6,5 | N/mm | BS 6469-99.1 |
| Unaged mechanical properties (200 mm/min) | | | |
| Tensile strength | 10,6 | MPa | IEC 60811-501 |
| Elongation at break | 175 | % | |
| Thermal ageing 7 days at 120°C | | | |
| Tensile strength variation (Δ) | 7 | % | IEC 60811-501 |
| Elongation at break variation (Δ) | -18 | % | |
| Thermal Mechanical Properties | | | |
| Hot Pressure Deformation (6h @ 90°C) | < 50 | % | IEC 60811-508 |
| Oil resistance test 4h at 70°C (IRM 902 – immersion) | | | |
| Tensile strength variation (Δ) | -13 | % | IEC 60811-404 |
| Elongation at break variation (Δ) | 17 | % | |

| UV – Resistance – UV SEPAP | Typical Value | Units (SI) | Test Method |
|--|---------------|------------|-------------|
| Cycle 1 – UVA 340 nm 1000 hours | | | |
| Tensile strength variation 0 to 1000 hours (Δ) | + 1 | % | ISO 4892-3 |
| Elongation at break variation after 1000 hours | - 29 | % | |

| Flammability | Typical Value | Units (SI) | Test Method |
|--|---------------|------------|-------------------------|
| Oxygen Index | 39 | % | ISO 4589-2 (ASTM D2863) |
| Temperature Index | 316 | °C | ISO 4589-3 |
| Halogen content | < 0,5 | % | IEC 60754-1 |
| <i>Acid gas emission</i> | | | |
| pH | > 4,3 | / | IEC 60754-2 |
| Conductivity | < 2,5 | μS/mm | IEC 60754-1 |
| <i>Smoke density measurement</i> | | | |
| Smoke density – Flaming mode (1,5 mm) Ds max | 34 | / | ASTM E 662 |
| Smoke density – Non Flaming mode (1,5 mm) Ds max | 286 | / | |

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 2 UV is a product able to run on standard extruders, based on low compression screw and head. This compound is supplied in aluminium foil bags. Pre-drying is not required before extrusion process.

RavaSafe® ZH-LSF 2 UV 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.

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