



Technical data sheet

RavaSafe® ZH-LSF 2

RavaSafe® ZH-LSF 2 is a thermoplastic zero halogen, low smoke flame retardant compound designed for general purpose insulation and sheathing application. This compound combines excellent processing, good flame retardancy and good mechanical properties.

Typical Application: Telecom, LV power cable application

Standard norms (type of material) : EN 50363 (T17, 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/cm ³	ISO 1183-1 (ASTM D792)
Melt flow index (150°C /21,6kg)	7	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/cm ²	IEC 60811-402
Tear strength 23°C	6,5	N/mm	BS 6469-99.1
<i>Unaged mechanical properties (200 mm/min)</i>			
Tensile strength	11,1	MPa	IEC 60811-501
Elongation at break	184	%	
<i>Thermal ageing 7 days at 120°C</i>			
Tensile strength variation (Δ)	7	%	IEC 60811-501
Elongation at break variation (Δ)	-18	%	
<i>Thermo Mechanical Properties</i>			
Hot Pressure Deformation (6h @ 90°C)	< 50	%	IEC 60811-508
<i>Oil resistance test 4h at 70°C (IRM 902 – immersion)</i>			
Tensile strength variation (Δ)	-13	%	IEC 60811-404
Elongation at break variation (Δ)	17	%	

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	/	

Electrical properties	Typical Value	Units (SI)	Test Method
Volume Resistivity	7,8x10 ¹⁴	Ω.cm	ASTM D 257
Surface Resistivity	2,4x10 ¹⁶	Ω	

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 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 is colorable. A full range of specific color masterbatches (RAVACOLOR™) and additive masterbatches (RAVABOOST™) are available.

Storage conditions

The thermoplastic compound must be stored at ambient temperature (not exceeding 30°C).

Packaging should remain sealed in order to avoid the moisture.

Avoid storage outside and in direct sunlight.

Long stocking time may negatively affect the quality of material.

If the bags left open, ensure that the material is thoroughly dry before use.

Pre-Drying

Our compound is supplied in aluminum foil lined bags or octa-boxes; providing the packaging has not been touched, material does not require pre-drying. If the material has been kept in a moisty environment or being taken from an open box, then dehumidifying is recommended, for approximately 2 hours at 70°C – 80°C.

Packaging

Available in 1250kg or 500kg card octabins, aluminium foiled, or 25kg aluminium bags in wooden pallet.

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