

RavaSafe® ZH-LSF 46 is a thermoplastic zero halogen, low smoke flame retardant compound designed for high flame retardancy sheathing applications.

This compound presents a high temperature stress crack resistance which allows it to be used as sheathing for all types of large and armored / shielded cables.

Standard norms (type of material): EN 50363 (M1); IEC 60502-1 (ST8); VDE 0207 (HM 4); BS 7655 (LTS2); IEC 60092 (SHF1); UNE 21123-4

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)	3,5	g/10 min	ISO 1133 (b)
Hardness (15 seconds)	50	Shore D	ISO R 868 (ASTM D2240)
Water immersion test (24h @ 70°C)	0,1	mg/cm²	IEC 60811-402
Tear strength 23°C	12,1	N/mm	BS 6469-99.1
Unaged mechanical properties (200 mm/min)			
Tensile strength	13,2	MPa	IEC 60811-501
Elongation at break	170	%	
Thermal ageing 7 days at 120°C			
Tensile strength variation (Δ)	14	%	IEC 60811-501
Elongation at break variation (Δ)	-22	%	
Thermal Mechanical Properties			
Hot Pressure Deformation (6h @ 90°C)	< 50	%	IEC 60811-508
Tear strength 50°C	8,5	N/mm	BS 6469-99.1
Tear strength 65°C	6,5	N/mm	BS 6469-99.1
Thermal Crack Resistance (150°C)	No Crack	-	Internal Method
Shrinkage (1h @ 80°C)	< 0,5	%	IEC 60811-502/503
Cold Bending (-40°C)	No Crack	-	Internal Method
Oil resistance test 4h at 70°C (IRM 902 – immersion)			
Tensile strength variation (Δ)	-23	%	IEC 60811-404
Elongation at break variation (Δ)	-26	%	

Flammability	Typical Value	Units (SI)	Test Method
Oxygen Index	38	%	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 46 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 46 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.