

**AMP UNIVERSAL LOW SMOKE ZERO HALOGEN (U-LSZH) CABLE
SHEATHING MATERIAL SPECIFICATION**

1.0 SCOPE

This specification covers the mechanical, chemical and fire performance of AMP's Universal Low Smoke Zero Halogen standard cable sheathing compound.

2.0 DESCRIPTION

The AMP U-LSZH cable sheathing compound is a UL 1581, and UL 1666, V0 rated thermoplastic flame retardant halogen free material based on EVA and other polymer groups. AMP U-LSZH has enhanced water barrier properties for indoor/outdoor single sheath applications.

3.0 MECHANICAL PROPERTIES

Tensile strength (IEC 811-1-1)	10.5 MPa
Elongation @ break (IEC 811-1-1)	155 %
Tear strength (BS 6499:99.1)	8 N/mm
Aged tensile strength (IEC 811-1-2)	14 MPa (7 days @110°C)
	Retention 131 %
Aged Elongation @ break (IEC 811-1-2)	140 % (7 days @110°C)
	Retention 89 %

4.0 PHYSICAL PROPERTIES

Hot pressure @ 90°C (IEC 811-3-1)	25 %
Hot deformation test @ 90°C (BS6469:99.1)	8 %
Heat shock @ 150°C (NES 518)	TBA
Hardness, Shore D (ASTM D-2240)	55
Specific gravity (ASTM D-792)	1.50 g/cm ³

5.0 FIRE PERFORMANCE

Oxygen index (ISO 4589-2)	36 %
Flammability temperature index (ISO 4589-3)	290°C
Halogen acid evolution (IEC 754-1)	Zero
Toxicity index (NES 713)	0.8
Smoke density flaming (ASTM E-662)	D _s max. 53, 7 minutes to max.
Smoke density non flaming (ASTM E-662)	D _s max. 210, 3 minutes to max.
Fire propagation (IEC 332-1 & 3)	Pass
Acid gas (IEC 754-1)	Pass
Smoke emission (IEC 1034)	Pass

6.0 WATER BARRIER PROPERTIES

Water absorption 10 days @ 70°C (IEC 811-1-3)	1 mg/cm ²
Water absorption 30 days @ 70°C (IEC 811-1-3)	1.7 mg/cm ²
Water absorption 90 days @ 70°C (IEC 811-1-3)	2.4 mg/cm ²

Source: *Material Manufacturer*