

Spiral wound Polyester/ Nomex[®] Heat-Shrink Tubing

FITCOTUBE® FT-M/N-HS

Heat-Shrink Tube with fast shrinking Polyester layer to coil a high-performance Nomex[®] insulator around the application in varnish impregnated electric motors.

The FT-M/N-HS prevents line failures in electric motors by securing and insulating electrical connections. Rapid shrink-on fitting provides comprehensive mechanical and electrical protection.

Operating temperature:	+155°C, short time +160°C
Shrink ratio:	30%
Standard color:	Nature/White Colors on request

Special designs:

Non-shrinking (NS); End caps; Low shrink rate

Key Benefits:

- Available with internal diameters from 2.5mm to 8.0mm
- Wall thicknesses from 0.24mm
- o Colour coding allows fast identification of sizes and components in motor windings
- o Tight manufacturing tolerances and product resilience suits bulk process engineering environments
- o Improved product performance under overload

Inner Nomex[®] Film

Properties of Base Film	Test Method	Requirements	Typical Value

Mechanical

Tensile strength	ASTM D 828-60	MD 28 N/cm TD 17 N/cm	17 N/cm 9 N/cm
Elongation	ASTM D 828-60	MD 3.5 TD 5	3.5 4.8

Properties of Base Film	Test Method	Requirements	Material thickness
			0.130mm / 0.180mm

Electrical

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Dielectric strength	ASTM D 149	AC Rapid Rise	12 kV/mm	12 kV/mm
Dielectric constant	ASTM D 150	10 ³ Hz	1.3	1.3
Dissipation Factor	ASTM D 150	10 ³ Hz	0.005	0.005

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Spiral wound Polyester/Aramid Heat-Shrink Tubing

FITCOTUBE® FT-M/N-HS

Outer Polyester Film Test Method Properties of Base Film Requirements Typical Value [37.5 HS film (37 µm)] Mechanical Tensile strength: Machine Direction (MD) ASTM D 882 _ 190 Transverse Direction (TD) ASTM D 882 260 _ Yield 19.10 m²/kg _ _ MD 2,100 MPa Modulus ASTM D 882 TD 3,600 MPa MD 170% ASTM D 882 Elongation TD 110% Thermal Melt Point ASTM D 3148-82 253-255°C (526-528K) Electrical **Dielectric strength** ASTM D 149 Min. 4 kV

Chemical

Water Vapour Transmission Rate	ASTM F 1249	38°C, 90% Relative Humidity	15 g/m2/ 24h
Oxygen Permeability	ASTM D 3985	Before shrinkage After shrinkage	75 cc/m² /24 h 30-45 cc/m² /24 h

Processing note: Care for clean and straight cutting edges. Start shrinkage on the end. Pre-heat metal body.

Packaging: On spools, cut lengths or printed tubing on request. Special sizes on request.

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