



The Mylar®/Nomex® insulating tube insulates and secures electrical connections in electric motors and other applications. Due to its high dielectric strength and impact resistance, this shrinkable insulating tube can also be used in demanding applications at short-term temperatures of up to 160 °C. Please call us for more information.

Nomex® / Mylar® Insulating Pipes, Shrinkable, Class F (155°C)

Properties

- Spiral Winding Insulation Tubes for use in varnish-impregnated electric motors with temperature class F
- Reliable fixation due to shrinkage of 35%.
- Inner diameters from 2.50 mm to 8.00 mm with wall thicknesses from 0.24 mm available
- Rapid shrinkage within 10
- Excellent dielectric strength and impact resistance.
- Insulating pipe made of five layers of Mylar®/Nomex® for applications with temperature class F and continuous temperatures of up to 155 °C.
- The materials are UL recognized

Technical data

Outer Laminate: DuPont™ Mylar®

Electrical properties			
Properties of the base film	Typical value	Test condition	Test method
	37.5 HS Slide (37 µm)		
Dielectric strength) [kV]	> 3,5	none	ASTM D 149

Physical properties				
Properties of the base film		Typical value	Test condition	Test method
		37.5 HS Slide (37 μm)		
Tear resistance				
Running direction	[Mpa]	190	Running direction	ASTM D 882
Transverse direction		260	Transverse direction	ASTM D 882
Yield [m2/kg]		19,10		
Tension module				
Running direction	[Mpa]	2,100		ASTM D 882
Transverse direction		3,600		ASTM D 882
Yield point				
Running direction	[%]	170		ASTM D 882
Transverse direction		110		ASTM D 882
Water vapor permeability	[g/m2/24 h]	15	38°C, 90% relative humidity	ASTM F 1249
Oxygen permeability	[cm3/m2/24 h]	75	before shrinking	ASTM D 3985
		30-45	after shrinking	ASTM D 3985

Optical properties		
Properties of the base film	Typical value	Test method
Melting point	253-255°C (526-528 K)	ASTM D 3148-82

Inner Laminate: DuPont™ Nomex® Grade 411

Electrical properties				
Properties of the film	Film thickness		Test condition	Test method
	0.130 mm	0.180 mm		
Dielectric strength [kV/mm]	12	12	AC steep ascent	ASTM D 149
Dielectric constant	1,3	1,3	1000 Hz	ASTM D 150
Loss factor	0,005	0,005	1000 Hz	ASTM D 150

Physical properties					
Properties of the film		Typical value		Test condition	Test method
Tear resistance					
Running direction Transverse direction	[N/cm]	17	28	ASTM D 828-60	
		9	17	ASTM D 828-60	
Elongation					
Running direction Transverse direction	[%]	3,5	3,5	ASTM D 828-60	
		4,8	5	ASTM D 828-60	

Electrical properties			
Properties of the base film	Typical value	Test condition	Test method
	37.5 HS Slide (37 µm)		
dielectric strength) [kV]	> 3,5		ASTM D 149

Physical properties				
Properties of the base film		Typical value	Test condition	Test method
		37.5 HS Slide (37 µm)		
Tear resistance				
Running direction	[Mpa]	190	Running direction	ASTM D 882
Transverse direction		260	Transverse direction	ASTM D 882
Yield [m2/kg]		19,10		
Tension module				
Running direction	[Mpa]	2,100		ASTM D 882
Transverse direction		3,600		ASTM D 882
Yield point				
Running direction	[%]	170		ASTM D 882
Transverse direction		110		ASTM D 882
Water vapor permeability	[g/m2/24 h]	15	38°C, 90% relative humidity	ASTM F 1249
Oxygen permeability	[cm3/m2/24 h]	75	before shrinking	ASTM D 3985
		30-45	after shrinking	ASTM D 3985

Optical properties		
Properties of the base film	Typical value	Test method
Melting point	253-255°C (526-528 K)	ASTM D 3148-82

Inner laminate: DuPont™ Nomex® Grade 411

Electrical properties				
Properties of the film	Film thickness		Test condition	Test method
	0.130 mm	0.180 mm		
Dielectric strength [kV/mm]	12	12	AC steep ascent	ASTM D 149
Dielectric constant	1,3	1,3	1000 Hz	ASTM D 150
Loss factor	0,005	0,005	1000 Hz	ASTM D 150

Physical properties					
Properties of the film		Typical value		Test condition	Test method
Tear resistance					
Running direction Transverse direction	[N/cm]	17	28	ASTM D 828-60	
		9	17	ASTM D 828-60	
Elongation					
Running direction Transverse direction	[%]	3,5	3,5	ASTM D 828-60	
		4,8	5	ASTM D 828-60	

Item number:

Example: IRSNM0100/005/0500

IRSNM = master number

0100 = 1.00 mm diameter

005 = 0.05 mm wall thickness

0500 = 500 mm length