

# Nylon

## Wire insulations and coatings

### Datasheet

Nylon is a magnet wire overcoat used:

1. To improve chemical resistance when applied over polyurethane and polyesterimide base coats
2. To improve wire windability in coiling operations (when used also with any of SPC's self-bonds)
3. To reduce the coefficient of friction during insertion processes. This last benefit is found most useful in thermocouple manufacturing processes

This coating is not intended to provide any benefit to electrical performance in coated wire products.

Data below represents typical wire properties when Nylon is used as an overcoat with a polyurethane basecoat (MW83-C) or a polyesterimide base coat (MW78-C).

### Electrical Properties

Electrical Properties	NEMA MW1000	ASTM D1676	IEC 851	JIS C3003	MW 78-C (Heavy), 24 AWG	MW83-C (Heavy), 24 AWG
Dielectric Strength @ 25 °C	3.8.1.1	69-75	13-4.2,3,4	11.1	13.5 kV	9.4 kV
Dissipation Factor @ 170 °C - 1kHz		107-114			0.14	0.15
Tangent Delta (DIN)					55/164 °C	66/167 °C

### Mechanical Properties

Mechanical Properties	NEMA MW1000	ASTM D1676	IEC 851	JIS C3003	MW 78-C (Heavy), 24 AWG	MW83-C (Heavy), 24 AWG
Adherence and Flexibility						
No Snap	3.3.1.1	141-148	8.5.1.1	8.1	Pass	Pass

20% Snap	3.3.1.1	141-148	9.1	Pass	Pass
Cut-Through Temperature	3.50.1.1	61-68		264 °C	248 °C
MW83-C Solderability 360 °C (No Flux)	3.13.1.1	178-185		n/a	4.5 sec.
MW78-C Solderability 455 °C (No Flux)	3.13.1.1	178-185		6.0 sec.	n/a

Disclaimer:

Recommendations are for guidance only, and the suitability of a material for a specific application can be confirmed only when we know the actual service conditions. Continuous development may necessitate changes in technical data without notice. This datasheet is only valid for Alleima materials.