

Poly

Wire insulations and coatings

Datasheet

Poly is a fast running, general purpose, Class 155 polyurethane wire enamel. Suitable for monolithic or dual coat applications, it meets the requirements of NEMA MW 75, MW 80 (MW 79 on finer gauges) also meets the requirements of JIS C 3003 for 'Pinhole' resistance.

Poly is available in clear and colored versions.

The primary benefit of the polyurethane is its easy solderability vs. the 180C tri-2-SO_d solderable Polyester coating (2 seconds at 380°C vs. 5 seconds at 455°C)

Polyurethane can be readily used on Copper, Aluminium and Copper-Clad Aluminium wires as a basecoat for the commonly applied thermoplastic bond coats. It is a cost-effective insulation to be applied to wires that are used in the manufacture of precision coils, as it provides end users manufacturing benefits in handling and solderability.

Typical applications are within motors, R.F. coils, relay, encapsulated coils, ignition coils, solenoids, low voltage transformers, Multi layer and precision wound coils, speaker voice coils.

Electrical properties

Property	NEMA MW-1000	ASTM D1676	IEC 851	JIS C 3003	(AWG 24)
Dissipation factor at 170°C (338°F) - 1 kHz		0.22			

Mechanical properties

Property	NEMA MW-1000	ASTM D1676	IEC 851	JIS C 3003	(AWG 24)
Adherence and flexibility	Pass 1d		Pass 1d		
Cut-through temperature	223°C (433°F)				
Heat shock 20% stretch - ½ h at 175°C (347°F)	Pass 3d				

Soldering properties

Property	NEMA MW-1000	ASTM D1676	IEC 851	JIS C 3003	(AWG 24)
at 340°C (644°F) - without/ with flux	10.0/7.0 sec				
at 360°C (680°F) - without/ with flux	4.0/3.0 sec				
at 380°C (716°F) - without/ with flux	2.0/1.5 sec				

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.