Tri-2-sod/Nylon

Wire insulations and coatings

Datasheet

Tri-2-sod is a solderable, Thermal Class 180 polyesterimide wire enamel that meets the requirements of NEMA MW1000, 77-C or 78-C (when applied with a Nylon overcoat, Tri-2-sod/Nylon). The Nylon top coat is applied to reduce the coefficient of friction during winding and/or insertion.

This coating combination can be applied as a basecoat when self-bonding magnet wire is required for a customer's specific coil winding/forming operation.

Tri-2-sod/Nylon can be soldered without the use of flux (on copper substrates), but soldering temperature and time are increased when directly compared to the Poly 180B/Nylon coating combination.

Tri-2-sod/Nylon is similar to the Tri-2-sod with the additional Nylon overcoat to improve the abrasion resistance. Typical of a dual coat construction, advantage is taken of the high thermal properties of the polyester-imide and the mechanical properties of the polyamide topcoat.

Typical applications are within fractional and integral horsepower motors, coils and relays, control and dry transformers, encapsulated coils and D.C. field coils.

Electrical properties

Electrical properties

	NEMA MW1000	ASTM D1676	IEC 851	JIS C3003	MW 77-C (Heavy), 18 AWG	MW 78-C (Heavy), 18 AWG
Dielectric strength @ 25°C	3.8.1.1	69-75	13-4.2,3,4	11.1	14.0 kV	13.5 kV
Dissipation factor @ 220°C - 1kHz		107-114			0.05	0.14
Tangent delta (DIN)					166°C	55/ 164°C

Mechanical properties

Mechanical properties

	NEMA MW1000	ASTM D1676	IEC 851	JIS C3003	MW 77-C (Heavy), 18 AWG	MW 78-C (Heavy), 18 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			306°C	264°C
Solderability 455°C (no flux)	3.13.1.1	178-185			5.5 sec.	6.0 sec.

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