Polytermacon S® Magnet Wire

General description

The POLYTERMACON S® magnet wire is made with an enamel based on solderable polyesterimide resins which provide excellent properties, such as solderability and thermal resistance.

POLYTERMACON S® wire is made in insulation builds: Single and Heavy.

POLYTERMACON S® magnet wire is recommended for use in electrical equipment with a thermal class of up to 180 °C.

UL Designation	Thermal class (°C)	NEMA MW-1000
PS 155	155	MW 26
PS 180	180	MW 77

Specifications

Meets the requirements set forth in the following standards:

- NEMA MW 1000, MW 26 and MW 77
- UL recognition under file E102627

Characteristics

- High thermal resistance
- High dielectric strength
- Solderable without having to strip the insulating film
- High thermoplastic flow values

Range of gauges

Insulation build	AWG	mm
Single	20 - 44	0.720 – 0.063
Heavy	20 - 40	0.720 – 0.063

Typical applications:

- Automotive coils
- Electronic coils
- Special transformer coils
- Shaded coils

NOT RECOMMENDED FOR:

- Applications with high winding stress
- Motors with slit winding

(*For these applications use Polytermacon SN®*)

TYPICAL TEST VALUES FOR POLYTERMACON S® HEAVY 25 AWG WIRE

Typical values only, not intended to be used as a specification

TEST	SPECIFICATION (ANSI / NEMA MW 1000) MW 77	TEST METHOD	TYPICAL RESULTS
Electrical			
Continuity (faults)	≤ 5 @ 1000 V	NEMA	0
Dielectric strength (VAC)	≥ 4725	NEMA	11760
Mechanical			
Scrape resistance (g)	Average of 3 measurements, ≥ 635	NEMA	684
Adherence and Flexibility	No cracks when elongated 15%, wrapped around a 1d mandrel	NEMA	No cracks
Elongation (%)	≥ 30	NEMA	33
Springback (°)	≤ 72	NEMA	68
Chemical			
Solderability	Maximum 6 seconds immersion time @ 470ºC	NEMA	Passes
Solubility	Not soften sufficiently to expose the bare conductor	NEMA	OK
Thermal			
Thermoplastic flow (°C)	≥ 225	NEMA	320
Heat shock	No cracks @ 20%, 3d, ½ hour, 200 °C	NEMA	No cracks

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