

Magnekon Polytermacon-SN[®]

Magnet Wire



A Viakable Company

Description

The POLYTERMACON-SN[®] magnet wire is manufactured with enamel formulated from solderable polyesterimide resins and a polyamide (Nylon) overcoat, thus giving excellent properties in solderability, thermal resistance, tenacity, winding ease, and cracking resistance.

This product is manufactured in two insulation builds – Single and Heavy, and is offered with a Copper conductor.

The POLYTERMACON-SN[®] magnet wire is recommended for use in electrical equipment with a thermal class of up to 180 °C.

UL Designation	Thermal Class	NEMA MW-1000
PSN 155	155 °C	MW 27
PSN 180	180 °C	MW 78

Specifications

Meets the requirements set forth in the following standards:

- NEMA MW 1000, MW 27 and MW 78.
- UL recognition under file E102627.

Characteristics

- Highly resistant to heat.
- High dielectric strength.
- Solderable without having to strip the insulating film.
- High thermoplastic flow.
- Excellent winding ease.
- High resistance to abrasion.

Range of Gauges

Copper Conductors		
Insulation Build	AWG	mm
Single	14 - 38	1.628 - 0.101
Heavy	21 - 38	0.723 - 0.101

Principal Applications

- Generators.
- Automotive coils.
- Electronic coils.
- Special transformer coils.
- Shaded coils.
- Motors with slit winding.
- Applications with high winding stress.



Technical Data

Polytermacon-SN[®] TYPICAL TEST VALUES FOR A POLYTERMACON-SN[®] HEAVY, 24 AWG WIRE (PSN 180).
 Typical values only, not intended to be used as a specification.

Test	Specification (ANSI / NEMA MW 1000) MW 78	Test Method	Typical Results
Electrical			
Dielectric Strength	≥ 4270 V	NEMA	10500 V
Continuity	≤ 5 @ 1000 V	NEMA	0 (Zero)
Mechanical			
Elongation	≥ 30%	NEMA	33%
Adherence and Flexibility	No cracks when elongated 20%, wrapped around a mandrel 3 times the diameter of the wire.	NEMA	No cracks
Springback	≤ 72 °	NEMA	68 °
Scrape Resistance	Average of 3 measurements; ≥ 635 grams.	NEMA	684 grams
Chemical			
Solderability	Maximum 6 seconds immersion time @ 470 °C.	NEMA	Passes
Solubility	Not softened sufficiently to expose conductor.	NEMA	OK
Thermal			
Heat Shock	No cracks @ 20%, wrapped around a mandrel 3 times the diameter of the wire, before heating for ½ hour @ 200 °C.	NEMA	No cracks
Thermoplastic Flow	≥ 200 °C	NEMA	320 °C.