

Polytermacon 200[®] Magnet Wire

General description

The POLYTERMACON 200[®] magnet wire made at Magnekon has a special enamel based on synthetic polymers (Polyesterimides) which, apart from their high resistance to heat, have excellent mechanical characteristics.

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

The POLYTERMACON 200[®] magnet wire is recommended for use in electrical equipment with a thermal class of up to 200 °C.

Specifications

Designation	Thermal class (°C)	NEMA MW-1000
P200 E200	200	MW 74

Meets the requirements set forth in the following standards:

- NMX-J-479
- NEMA MW 1000, MW 30 and MW 74
- UL recognition under file E102627

Characteristics

- High resistance to abrasion.
- Resistant to high temperatures.
- Great winding ease.
- Highly resistant to heat shock.
- Great resistance to thermoplastic flow.
- High resistance to electrical overloads.
- Resistant to solvents.
- Very high degree of dielectric strength.

Range of gauges

Insulation build	AWG	mm
Single	4 - 42	5.189 - 0.064
Heavy	4 - 42	5.189 - 0.064

Principal applications:

AUTOMOTIVE

- Alternators
- Field coils
- Starter motors

ELECTRONICS

- Coils for color TV yokes

SPECIAL TRANSFORMERS

- Ballasts for mercury lamps

DISTRIBUTION TRANSFORMERS

- Dry, 180° Class

LOW POWER MOTORS AND FRACTIONAL

- Open
- Starter coils

POWER TRANSFORMERS

- Dry

MOTORS IN GENERAL



TYPICAL TEST VALUES FOR A POLYTERMACON 200® HEAVY 18 AWG WIRE

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

TEST	SPECIFICATION (ANSI / NEMA MW 1000)	TEST METHOD	RESULT
Electrical			
Dielectric Strength	≥ 5125 V	NEMA	11800 V
Continuity	≤ 5 discontinuities per 100 feet @ 1500 V	NEMA	0 (Zero)
Mechanical			
Elongation	Minimum of 32%	NEMA	40%
Adherence and Flexibility	20% sudden jerk, rolled 10 turns around a mandrel 3 times the diameter of the wire, visual inspection, no cracks or exposed conductor	NEMA	No cracks
Springback	≤ 58°	NEMA	51°
Unidirectional Abrasion	Average of 3 measurements @ 0°, 120° and 240°; ≥ 1150 grams. Minimum individual measurement of 980 grams	NEMA	1485 grams
Chemical			
Solubility	Immersion for 30 minutes @ 60 °C in Xylol and Xylol/Butil Cellsolve 50/50; dry samples for 10 minutes @ 150 °C	NEMA	Passes
Thermal			
Thermal Stability	20,000 hours @ 200 °C	ASTM	200 °C
Heat Shock	20% sudden jerk, rolled 10 turns around a mandrel 3 times the diameter of the wire, before heating for ½ hour @ 220 °C	NEMA	Passes
Thermoplastic Flow	≥ 300 °C	NEMA	400 °C

* Under specific requirement