

Polytermacon-C[®] Magnet Wire

General description

The POLYTERMACON-C[®] magnet wire is basically a POLYTERMACON 200[®] wire that is coated with a thermoplastic self-bonding film, capable of producing a strong adhesive force among the turns of a coil when heat is applied. This adhesive force, once obtained, will be resistant to overheating and to solvent attacks.

This product is manufactured in Type 1 and Type 2 insulation builds and is offered with a Copper conductor.

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

Specifications

Meets the requirements set forth in the following standards:

- NEMA MW 1000, MW 74 for base properties
- NEMA MW 1000, MW 102 for bond coat properties

Characteristics

- Ease in forming self-bonding coils
- Great winding ease
- Resistant to heat shock
- High dielectric strength

Range of gauges

Insulation build	AWG	mm
Type 1	21 - 27	0.723 – 0.361
Type 2	21 - 27	0.723 – 0.361

Principal applications:

AUTOMOTIVE

- Alternators
- Clutch for A/C

ELECTRONICS

- Coils in color TV yokes

GENERAL APPLICATIONS

- Diverse types of self-bonding coils

TYPICAL TEST VALUES FOR A TYPE 2 PTC 180 24 AWG.

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

TEST	SPECIFICATION (ANSI / NEMA MW 1000) (a)	TEST METHOD	TYPICAL RESULTS
Electrical			
Continuity (faults)	≤ 5 @ 1500 V	NEMA	0 @ 3000 V
Dielectric strength (VAC)	≥ 4870	NEMA	14500

Mechanical			
Adherence and Flexibility	No cracks when elongated 20%, wrapped around a 3d mandrel	NEMA	No cracks
Elongation (%)	≥ 28	NEMA	36
Springback (°)	≤ 67	NEMA	64
Bond Strength (lb)	≥ 30 for 18 AWG	NEMA (b)	≥ 30 for 24 AWG

Thermal			
Thermoplastic flow (°C)	≥ 300	NEMA	350
Heat shock	No cracks @ 20%, 3d, ½ hour, 200 °C	NEMA	No cracks
Cement heat test	No separation must appear between the turns of a coil with a 4.7 kg weight applied during 5 seconds after heating for 1 hour 150 °C	NEMA	Passes

(a) Based on NEMA MW 72

(b) Based on NEMA MW 102