

Magnekon Formacon®

Magnet Wire



A Viakable Company

Description

The FORMAICON® magnet wire is manufactured using an enamel based on modified polyvinyl formal resins. The enamel film is applied onto the wire by passing it through dies with perfectly controlled dimensions and curing it in special ovens through a continuous process. Due to a careful process control, excellent product quality is obtained.

FORMAICON® is made in two enamel builds:

- Single and Heavy.

FORMAICON® magnet wire is recommended for application in electrical equipment with operating temperatures of up to 120 °C.

Specifications

Meets the requirements set forth in the following standards:

- NMX-J-072.
- NEMA MW 1000, MW 15 and MW 18.

Characteristics

- Presents great flexibility and resistance to abrasion.
- Allows high winding speeds.
- Has a very high dielectric strength.
- Presents excellent resistance to heat shock.
- Is compatible with a great number of oils, varnishes, waxes, and impregnating compounds.
- Is excellent for use in oil transformers.

Range of Gauges

Insulation Build	AWG	mm
Single	4 - 28	5.190 - 0.321
Heavy	4 - 28	5.190 - 0.321

Also available in Square and Rectangular shapes. Please inquire for specific details.

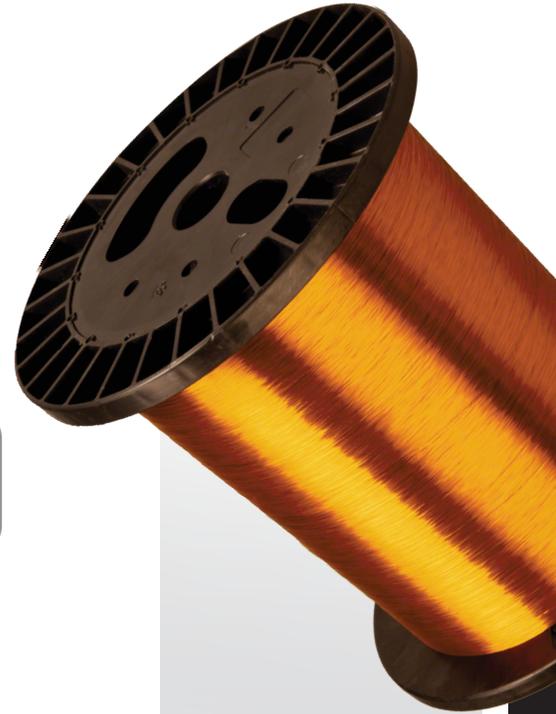
Principal Applications

DISTRIBUTION TRANSFORMERS

- In oil.

POWER TRANSFORMERS

- In oil.



Technical Data

Formaçon®

TYPICAL TEST VALUES FOR A HEAVY-BUILD FORMAÇON® 18 AWG WIRE.
Typical values only, not intended to be used as a specification.

Test	Specification (ANSI / NEMA MW 1000) MW 15	Test Method	Typical Results
Electrical			
Dielectric Strength	≥ of 5125 V	NEMA	10300 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	Passes
Springback	≤ 58 °	NEMA	50 °
Unidirectional Abrasion	Average of 3 measurements @ 0°, 120° and 240° with a test weight of 882 grams; ≥ 980 grams.	NEMA	1330 grams
Chemical			
Resistance to Transformer Oil	1000 hours immersion at 150 °C in sealed tube	NEMA (a)	Passes
Resistance to Solvents	Immersion for 24 hours, after heating to 125 °C		
	Naphtha	Not softened sufficiently to expose the bare conductor	Passes
	Toluene		Passes
	Ethylc Alcohol		Passes
	5% Sulfuric Acid		Passes
1% Potassium Hydroxide	Passes		
Solubility	30 minutes immersion @ 60 °C in Xylene after drying sample for 10 minutes @ 150 °C.	NEMA	Passes
Curing	Boilin in Alchohol/Toluene 70/30 for 5 minutes.		Passes
Thermal			
Thermal Stability	20000 hours @ 200 °C	ASTM	120 °C
Heat Shock	20% sudden jerk, rolled 10 turns around a mandrel 3 times the diameter of the wire, before heating for ½ hour @ 175 °C.	NEMA	Passes
Thermoplastic Flow	≥ 180 °C	NEMA	220 °C