

Magnekon Corona Guard®

Magnet Wire



A Viakable Company

Description

CORONA GUARD® magnet wire has been specially designed to be used in inverter driven motors, also offering excellent windability characteristics, including a low coefficient of friction and a high scrape resistance.

CORONA GUARD® insulation increases the insulation life when used in an inverter duty environment; it also has an excellent high temperature resistance, high adherence and flexibility properties and excellent lubricity.

All these properties are in addition to the excellent characteristics of the POLYTERMACON/Al® magnet wire, which forms the basis for CORONA GUARD®. It is manufactured in Heavy build insulation and is offered with a Copper conductor.

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

UL Designation	Thermal Class	NEMA MW-1000
PICK 200	200 °C Copper	MW 35 MW 36

Specifications

Meets the requirements set forth in the following standards:

- NMJ-J-482.
- NEMA MW 1000, MW 35 and MW 36.
- IEC 317-13.
- Magnekon tests for Pulse Resistance and Voltage Endurance.
- UL recognition under file E102627.

Characteristics

- Suitable for inverter driven motors, as well as high speed winding and hard insertion processes.
- Low coefficient of friction.
- High scrape resistant.
- Excellent concentricity.
- Very resistant to high temperatures.
- High resistance to electrical overloads.
- Very high dielectric strength.
- Highly resistant to heat shock.
- Highly resistant to thermoplastic flow.
- Resistant to solvents.

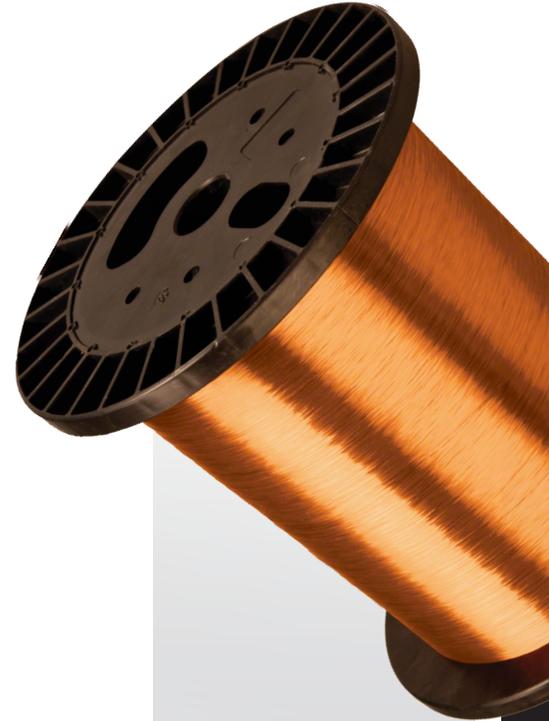
Range of Gauges

Insulation Build	AWG	mm
Heavy (Code PTD/AICG)	13 - 30	1.825 - 0.250

CORONA GUARD® insulation is also available in Square and Rectangular shapes. Please inquire for specific details.

Principal Applications

CORONA GUARD® magnet wire is specially intended, but not limited to, inverter driven motors, in combination with high speed winding machines and hard insertion processes.



Technical Data

Corona Guard® TYPICAL TEST VALUES FOR A CORONA GUARD® HEAVY 18 AWG WIRE.
Typical values only, not intended to be used as a specification.

Test	Specification (ANSI / NEMA MW 1000) MW 35	Test Method	Typical Results
Electrical			
Pulse Resistance Test (s)	Not specified	Magnekon	60000
Continuity (faults)	≤ 5 @ 1500 V	NEMA	0 @ 3000 V
Pinhole (faults)	Not specified	JIS C3003	0 (Zero)
Dielectric Strength (VAC)	≥ 5700 V	NEMA	13500 V
Mechanical			
Scrape Resistance	Average of 3 measurements @ 0 °C, 120 °C and 240 °C, ≥ 1150	NEMA	1750 grams
Adherence and Flexibility	No cracks when elongated 20%, wrapped around a mandrel 3 times the diameter of the wire.	NEMA	No cracks
Elongation	Minimum of 32%	NEMA	40%
Dynamic Coefficient of Friction	Not specified.	1000 g weight	0.033
Twisted Pair Pull	Not specified.		6.0 lb
Springback	≤ 58 °	NEMA	54 °
Chemical			
Solubility	Not soften sufficiently to expose the bare conductor.	NEMA	Passes
Thermal			
Thermoplastic Flow	≥ 300 °C	NEMA	3900 °C
Heat Shock	No cracks @ 20%, 3 times the diameter of the wire, before heating for ½ hour @ 220 °C.	NEMA	No cracks