# Magnekon Termacon-N®

**Magnet Wire**

A Viakable Company

## Description

The TERMACON-N® magnet wire is made with insulating enamels based on polyester resins and applying a Polyamide (Nylon) coat over this base coat. This product combines the Polyester and Polyamide's excellent properties of resistance to abrasion and handling, as well as a great resistance to high temperature and solvents, in addition to its great dielectric strength, which remains unaltered at high temperatures.

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

The TERMACON-N® magnet wire with a copper conductor is recommended for use in electrical equipment with a thermal class of up to 180 °C.

| UL Designation | Thermal Class | NEMA MW-1000 |
|---|---|---|
| TN 155 | 155 °C | MW 24 |
| TN 180 | 180 °C | MW 76 |
| TNE 180 | 180 °C | MW 76 |
| TNE 200 | 200 °C | – |

## Specifications

Meets the requirements set forth in the following standards:

- NMX-J-487.
- NEMA MW 1000, MW 24 and MW 76.
- UL recognition under file E102627.

## Characteristics

- High degree of dielectric strength.
- Great resistance to organic solvents.
- Excellent adherence of insulation to conductor.
- Compatible with a great variety of encapsulating varnishes.
- Highly resistant to heat shock.

## Range of Gauges

| Insulation Build | AWG | mm |
|---|---|---|
| Single | 14 - 34 | 1.628 - 0.160 |
| Heavy | 8 - 44 | 3.264 - 0.050 |

## Principal Applications

### AUTOMOTIVE

- Alternators.
- Regulator coils.
- Field coils.
- Horn coils.

### SPECIAL TRANSFORMERS

- Measurement coils.

### LOW POWER AND FRACTIONAL MOTORS

- Open.

### DISTRIBUTION TRANSFORMERS

- Dry.

### MOTORS IN GENERAL

## Technical Data

# Termacon-N®

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

| Test | Specification (ANSI / NEMA MW 1000) | 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 Solvents | **Immersion for 24 hours, after heating to 125 °C** | Not softened sufficiently to expose the bare conductor | |
| | Naphtha | | Passes |
| | Toluene | | Passes |
| | Ethylic Alcohol | | Passes |
| | 5% Sulfuric Acid | | Passes |
| R-22 Refrigerant Extraction* | ≤ 0.25% | | 0.20% |
| **Thermal** | | | |
| Thermal Stability | 20000 hours @ 180 °C | ASTM | 180 °C |
| Heat Shock | 20% sudden jerk, rolled 10 turns around a mandrel 3 times the diameter of the wire, before heating for ½ hour @ 200 °C. | NEMA | Passes |
| Thermoplastic Flow | ≥ 225 °C | NEMA | 280 °C |