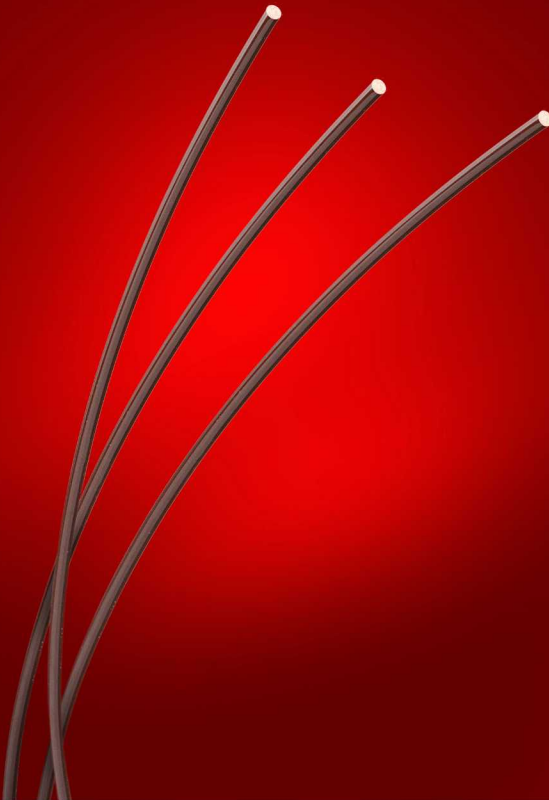


NanoMax

TAIHNM

Thermal Class: 220°C



Features and Benefits

Rea Magnet Wire has combined the best available manufacturing techniques and available enamels to create industry-leading, inverter-grade magnet wire. We proudly introduce, NanoMax, which is the best corona resistant magnet wire available in the market.

- 2X the corona resistance of the next-best inverter-grade wire as measured by voltage endurance testing to support the most rugged applications.
- 2X softer wire as measured by low-stress elongation to help in the winding process.
- Best-in-class scrape resistance as measured by repeated scrape testing for the most severe winding conditions.

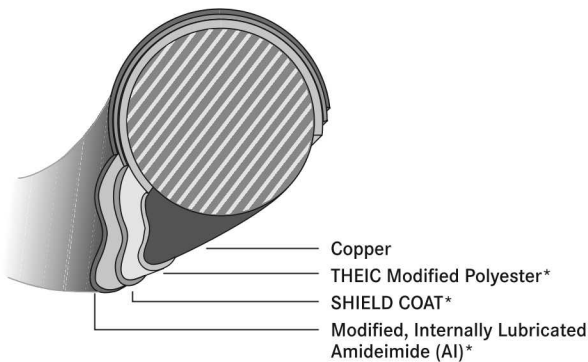
Markets

Motors/Generators:

- General
- Commercial & Industrial
- Generator

Typical Applications

Hand wound and high speed windings with difficult insertion and winding characteristics for inverter-driven motors, high frequency transformers, and high voltage motors



*Multiple Coats

General Information

Over 375 motor repair shops were surveyed in assistance to design this product.

Insulation Material

Rea Material Code: TAIHNM

Rea Insulation Code: 2J

Round

NEMA: MW 37-C

UL: file number. E37683

Availability

| Round | heavy |
|--------|-----------|
| Copper | 14-19 AWG |



Thermal

| Thermal Endurance | | |
|------------------------------------|---------|---------|
| 20,000 hr life | >200°C | |
| Thermoplastic Flow | minimum | typical |
| | 325°C | 350°C |
| Heat Shock (20%3x) | | |
| 1/2 hr at 240°C minimum no cracks | | |
| Solderability | | |
| Not designed to be self-solderable | | |

Mechanical

| Mandrel Flexibility | minimum | typical |
|---------------------|-----------|------------|
| After Elongation | 20% 3x OK | 100% 2x OK |
| After Snap | 3x OK | 2x OK |
| Elongation | 32 | 40 |
| Unilateral Scrape | | |
| Avg. of 3 sides | 1150 gms | 1300 gms |
| Repeated Scrape | | |
| 700 grams | 100 gms | 250 gms |
| Dynamic C of F | | |
| | | 0.045 |



Electrical

| Dielectric Breakdown | minimum | typical |
|--|-------------------------|---------|
| NEMA | 5.7 kV | 12.0 kV |
| @ RT | 12.0 kV | |
| @220° C | 75% of room temperature | |
| Corona Inception Voltage | | |
| | 500V | 600V |
| Pulse Endurance Test | | |
| 20,000 Hz, 2000 V, 0.025 microsecond rise time | | |
| 150°C, 50% Duty Cycle - Twisted Pairs | | |
| 18 HTAIH Reference = 600 seconds | | |
| 18 HTAINM > 80,000 seconds | | |
| Pulse Endurance Test >100 | | |
| >200 | | |

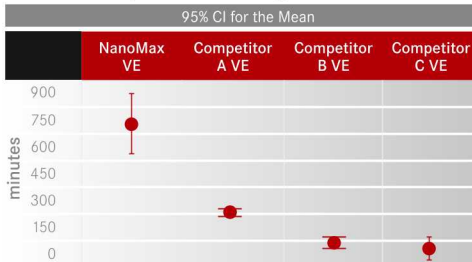
Chemical

| Retained Dielectric | |
|---|--|
| After 72 hrs exposure + 300°C conditioning: | |
| 3.5 kV | |
| R-22 Extractables | |
| .08% | |
| Resistance to Solvents Including | |
| After 24 hrs @ RT: Pass | |
| Xylene | |
| 50/50 Cellosolve/Xylene | |
| Perchloroethylene | |
| 1% NaOH | |
| 28% Sulfuric Acid | |
| Gasohol | |

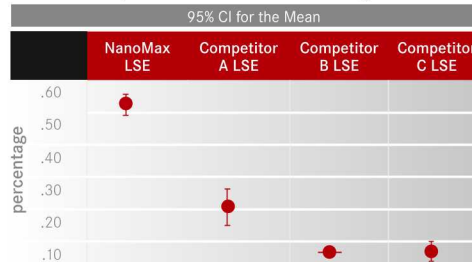
NanoMax versus Competitive Wire

Individual standard deviations are used to calculate the intervals.

Interval Plot of NanoMax vs. Competition on Voltage Endurance



Interval Plot of NanoMax vs. Competition on Low Stress Elongation



Interval Plot of NanoMax vs. Competition on Repeated Scrape

