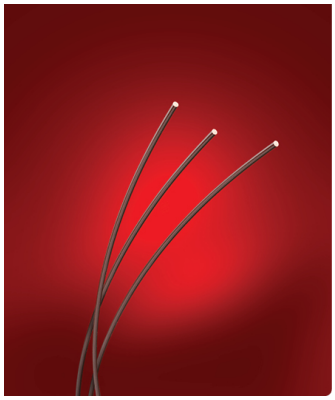

NANOMAX

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.

Rea Material Code: TAIHNM

Rea Insulation Code: 2J

Insulation Material Description: Theic Modified Polyester + Shieldcoat + Modified, Internally Lubricated Amideimide (AI)

Thermal Class: 220

Shape: Round

Conductor: Copper

NEMA Specification: MW 37-C

UL Number: E37683

MARKETS

Motors/Generators:
- General
- Comm & Ind
- 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

FEATURES AND BENEFITS

- 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.
- 220°C thermal class as approved by UL.

Wire Performance to the Max

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

AVAILABILITY

Heavy
14-19 AWG

THERMAL

Thermal Endurance		
		>200°C
Thermoplastic Flow	**minimum**	**typical**
	325°C	350°C
Heat Shock (20% 3X)		
		240°C
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	**minimum**	**typical**
Avg. of 3 sides	1150 gms	1700 gms
Repeated Scrape	**minimum**	**typical**
700 gms	100	250
Dynamic C of F	**minimum**	**typical**
		0.045

ELECTRICAL

Dielectric Breakdown		
@RT		12.0 kV
@ 220° C		75% of room temperature
Dielectric Breakdown	**minimum**	**typical**
	5.7 kV	12.0 kV
Corona Inception VItage	**minimum**	**typical**
	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 Index >100		
		>200

CHEMICAL

Resistance to Solvents	
After 24 hrs @ RT	After 24 hrs @ RTXylene 50/50 Cellosolve/Xylene Perchloroethylene 1% NaOH 28% Sulfuric Acid Gasohol

Retained Dielectric	
72 hrs Exposure + 300°C Conditioning	3.5 kV

R-22 Extractables
.08%