



## SUPER HYSLIK 220

Rea Material Code: **TAIHT**

Rea Insulation Code: **24**

Insulation Material  
Description: **Theic  
Modified Polyester  
overcoated with  
Polyamide Imide (AI)**

Thermal Class: **220**

Shape: **Round**

Conductor: **Copper**

NEMA Specification: **MW  
37-C**

UL Number: **E37683**

### MARKETS

Motors/Generators:

**General  
Comm & Ind  
Generator  
Traction**

Automotive:

**General**

### TYPICAL APPLICATIONS

High speed motor windings with difficult insertion and winding characteristics, dry-type transformers, automotive alternator stators, and solenoids

### FEATURES AND BENEFITS

- Excellent moisture resistance
- Improved dual insulation system, modified to optimize scrape resistance and surface lubricity
- Improved windability and processibility. Specially engineered topcoat designed for improved surface lubricity and toughness
- Superior performance in hermetics (see chemical data on following page)

#### Basecoat

Excellent adhesion and flexibility High thermal endurance High temperature dielectric Overload resistant Resists thermoplastic flow

#### Topcoat

Improved surface toughness Improved surface lubricity Abrasion resistant Heat shock resistant Moisture resistant Chemical resistant Varnish craze resistant

### AVAILABILITY

### TYPICAL PROPERTIES

This data is typical of 18 AWG copper, heavy build insulation only. It is not intended to be used to create specification limits.

#### THERMAL

Thermal Endurance		
	>220°C on copper	
Thermoplastic Flow	minimum	typical
	300°C	350°C
Heat Shock (20% 3X)		
	20% 3x @ 240°C	
Stress Relief Temperature		
	160°C	

#### MECHANICAL

Mandrel Flexibility	minimum	typical
After Elongation	20% 3x OK	30% 1x OK
After Snap	3x OK	1x OK
Unilateral Scrape	minimum	typical
Avg. of 3 sides	1150 gms	1700 gms
Repeated Scrape	minimum	typical
700 gms	90 strokes	120 strokes
Dynamic C of F	minimum	typical
	0.0 6	

#### ELECTRICAL

Dielectric Breakdown		
@RT	11 kV	
@ 200° C	7 kV	
Insulation Resistance		
@ RT	5x 10 <sup>13</sup> ohms	
@ 200°C	9.2x10 <sup>10</sup> ohms	
Corona Inception Voltage	minimum	typical
	580V	

Heavy
1-32 AWG

High Voltage Continuity	
NEMA @ 1500 V DC	5 faults/100 ft max
Typical @ 2000 DC	0-1 faults/100 ft
<b>CHEMICAL</b>	
Resistance to Solvents	
After 24 hrs @ RT	Perchloreothylene 1% NaOH 28% Sulfuric Acid Gasohol and others
After 30 mins @ 60°C	Xylene Butyl Cellosolve/Xylene
Retained Dielectric	
72 hrs Exposure + 300°C Conditioning	3.5 kV
72 hrs Exposure +150°C Conditioning	10 kV
R-22 Extractables	
	<.0 8%