

## APPLICATIONS

### Typical Applications

Dry-type transformers, hermetic motors, tool motors, automotive alternator stators, solenoids, television high-voltage transformers, toroidal television yokes

## PRODUCT DESCRIPTION

**Thermal Class: 200 (Copper)  
220 (Aluminum)**

### Features and Benefits

Super Hyslik 200 includes a proprietary internal lubricating system to aid windability and insertion.

Tough abrasion-resistant surface which withstands automated winding operations.

Excellent dielectric performance and corona resistance.

Superior chemical and moisture resistance, especially with refrigerants in hermetic applications.

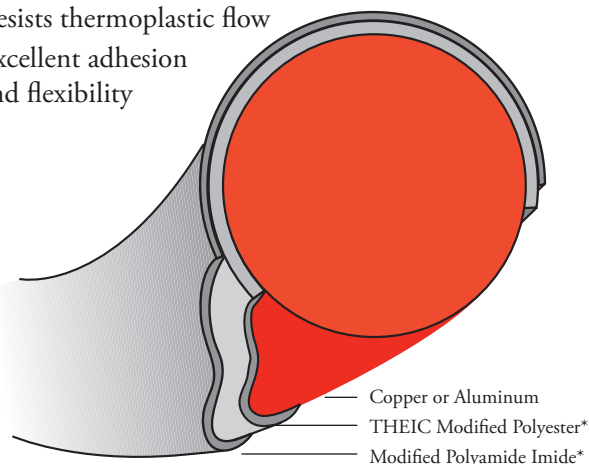
Superior thermal overload protection, especially during locked-rotor conditions.

Superior performance in hermetics.

(See chemical data)

### Basecoat

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



\*multiple coats

### Topcoat

Heat shock resistant  
Moisture resistant  
Surface toughness  
Chemical resistant

## GENERAL INFORMATION

References are provided for comparative purposes

### Round

NEMA: Copper MW 35-C, MW 73-C  
Aluminum MW 35-A, MW 73-A  
UL: File No. E37683

### Square & Rectangular

NEMA: MW 36-C (Cu)  
UL: File No. E37683

#### Round

#### Copper

Single 14-38 AWG  
Heavy 4-37 AWG

#### Aluminum

Single 14-27 AWG  
Heavy 6-27 AWG

#### Square

**Copper (heavy)** 1-14 AWG

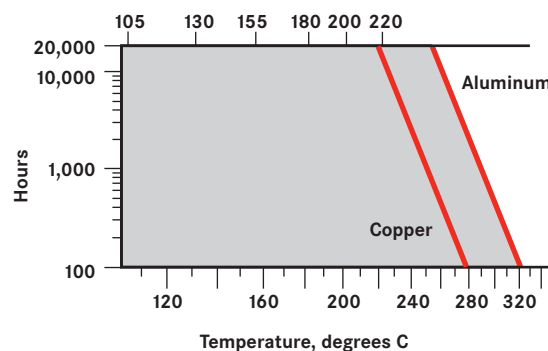
#### Rectangular (heavy)

#### Copper

Min width .081"  
Max width .750"  
Min thickness .030"  
Max thickness .292"

### Measured Thermal Endurance

Expected Thermal Life (ASTM D 2307), 18 AWG, Heavy Build Insulation



## 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

20,000 hr Life: >210°C

#### Thermoplastic Flow

Min: 300°C typical: 350°C

#### Heat Shock (20% 3x)

1/2 hr @ 220°C min. no cracks

1/2 hr @ 240°C min. no cracks

**Stress Relief Temp** 160°C



### MECHANICAL

#### Mandrel Flexibility

After Elongation min: 20% 3x OK  
typical: 30% 1x OK

After Snap min: 3x OK  
typical: 1x OK

#### Unilateral Scrape

Avg. of 3 sides min: 1150 gms  
typical: 1700 gms

#### Repeated Scrape

700 gms min: 60 strokes  
typical: 100 strokes

**Dynamic C of F** typical: 0.046



### ELECTRICAL

#### Dielectric Breakdown

@ RT: 11 kV

@ 200°C: 7 kV

#### High Voltage DC Continuity

NEMA @ 1500 V DC: 5 faults/100 feet max  
typical @ 2000 V DC: 0-1 faults/100 feet



### CHEMICAL

#### Retained Dielectric

After 72 hrs exposure to R-22 + 300°C  
conditioning: 3.5 kV

**R-22 Extractables** .08%

#### Resistance to Solvents

After 24 hrs @ RT: Pass,

Solvents Including:

Xylene

50/50 Cellosolve/Xylene,

Perchloroethylene

1% NaOH,

28% Sulfuric Acid,

Gasohol

Procedure followed to determine published value:

NEMA = National Electrical Manufacturers Association

JIS = Japanese Industrial Standards

IEC = International Electrotechnical Commission

ASTM = American Society for Testing and Materials