Super Hyslik 220®

TAIHT

APPLICATIONS

Typical Applications

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

PRODUCT DESCRIPTION

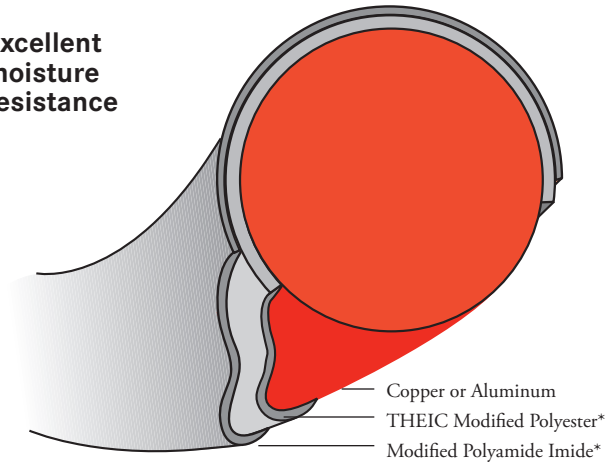
Thermal Class: 220 (Copper)

Improved dual insulation system, modified to optimize scrape resistance and surface lubricity

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

Excellent moisture resistance



*multiple coats

Improved windability and processibility

Specially engineered topcoat designed for improved surface lubricity and toughness

Superior performance in hermetics

(See chemical data)

GENERAL INFORMATION

References are provided for comparative purposes

Round

NEMA: MW 37-C
UL: File No. E37683

Rectangular

NEMA: MW 38-C

Availability

Round

Copper

Heavy	4-30 AWG

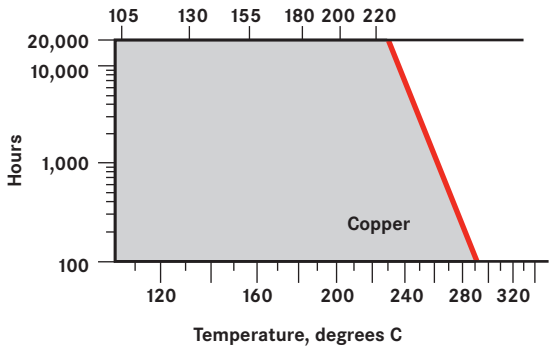
Rectangular

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



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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: >220°C on Copper

Thermoplastic Flow
Min: 300°C typical: 350°C

Heat Shock (20% 3x)
1/2 hr @ 240°C 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: 100 strokes typical: 200 strokes

Dynamic C of F typical: 0.06

ELECTRICAL

Dielectric Breakdown
@ RT: 11 kV
@ 200°C: 7 kV

Insulation Resistance
@ RT: $5x10^{13}$ ohms
@ 200°C: $9.2x10^{10}$ ohms

Corona Inception Voltage
typical: 580 V

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 R-22
72 hrs + 300°C conditioning: 3.5 kV
72 hrs + 150°C conditioning: 10 kV

R-22 Extractables: <.08%

Resistance to Solvents

After 30 min in 60°C
- Xylene
- Butyl Cellosolve/Xylene

After 24 hours @ RT
- Perchloroethylene
- 1% NaOH
- 28% Sulfuric Acid
- Gasohol
- And others

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

Rea

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