Essex® Polyflex™/225

Magnet Wire / Winding Wire

PRODUCT DATA SHEET

Class 200° - Aluminum - Round, Square and Rectangular Conductors - Polymer Coated

APPLICATION

Polyflex™/225 is an extruded, high temperature insulated polymer wire which provides excellent compatibility with various industry transformer oils, along with increased dielectrics, winding speeds, and high resistance to mechanical damage from winding processes. The product has a high thermal grade, which helps increase the reliability of the conductor on windings with reduced heat dissipation or high temperature spots. The high thermal grade is also an excellent option for oil-immersed transformers subjected to frequent overload cycles. This product is recommended, but not limited to the following applications:

- Oil-immersed distribution transformers
- Utility transformers

ENGINEERING HIGHLIGHTS

1. THERMAL CLASSIFICATION

Polyflex™/225 is a Class 200°C material when measured in accordance with the ASTM D 2307 test procedure.

2. HEAT SHOCK

Polyflex™/225 easily passes 220°C heat shock.

3. WINDABILITY

Polyflex™/225 excels in winding wire applications because of its superior flexibility and adhesion properties.

4. ELECTRICAL

Polyflex™/225 polymer exhibits high dielectric strength, > 5kV per ASTM D 149.

5. CHEMICAL

Polyflex™/225 exhibits excellent resistance to transformer oils which helps it perform well in oil-immersed transformer applications.

6. TERMINATION

Polyflex™/225 is a non-solderable product and must be mechanically stripped before soldering, or terminated by means of insulation piercing terminals.

7. NORMAL AVAILABILITY

- Round, Aluminum
- Square and Rectangular, Aluminum

Please consult magnet wire marketing for size and build information.

SUPERIOR ESSEX®

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PRODUCT DATA SHEET

The product has been tested against NEMA MW 15-A and MW 18-A for comparison purposes only.
The following performance data is representative of rectangular aluminum extruded product.

PROPERTIES	TYPICAL PERFORMANCE*	REQUIRED PERFORMANCE
THERMAL		
Heat Shock Resistance @ 220°C	Pass	15%, no cracks†
Thermoplastic Flow	260°C, average	250°C, minimum
PHYSICAL		
Adhesion and Flexibility	Pass	15%, no cracks†
Tensile	9,800 psi, average	9,500 psi, minimum 14,500 psi, maximum
Yield Strength	6,750 psi, average	5,000 psi, minimum @ 0.2% offset
Elongation	31%	15%, minimum†
ELECTRICAL		
Dielectric Breakdown Voltage	7,100 volts, average	2,500 volts, minimum†
CHEMICAL		
Insulation Build	5-11 mils, or as specified by customer	
Solvent Resistance	Passes all NEMA Solvent Resistance Requirements†	

* The values shown represent typical average results and are not intended to be used as design data or specification limits. Unless noted, performance data is from rectangular Polyflex™/225.
† Requirements of NEMA MW 1000; Section MW 18-A.

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