Technical Data Sheet

Secondary Insulation

Pedigree® 2500-35

Waterborne Impregnating Resin

Pedigree® 2500-35

Product Description

Pedigree® 2500-35 is a single-component, water-borne, heat-cured impregnating resin.

Areas of Application

Impregnation of motor and transformer windings

Features and Benefits

- Water-based – formulated without hazardous air pollutants or SARA 313 reportable substances [1]

- Low VOC - less than one pound per gallon

- Low viscosity for excellent penetration

- UL recognized insulation systems up to Class 240

Application Methods

Pedigree® 2500-35 is a concentrated resin.

It should be reduced with water for conventional dip-and bake application.

Transportation / Storage

Store below 25°C / 77°F in a dry controlled environment out of direct sunlight. This material should be suitable for use stored under these conditions in the original sealed containers for six (6) months from the date of shipment.

Failure to store this product as recommended above may lead to deterioration in product performance.

Mix product thoroughly before use.

Dip tank pH should be maintained between 7.5 and 8.5. See ELANTAS PDG technical bulletin *TI-4004 Water-Based Resin Maintenance* for additional information.

Health / Safety

Refer to the Material Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value	Units
Viscosity	25°C / 77°F	200 – 2000	cP
Non-Volatile Content	1½ g – 3 h – 135°C	34.0 – 36.0	%
Weight per Gallon	25°C / 77°F	8.7 – 9.1	pounds
Viscosity Reducer		Potable tap water	
pH Adjuster		ELAN-Plus™ BS-308 pH Adjuster	
Flash Point	ASTM D93	>94 >201	°C °F

[1] Contains no HAPs or SARA 313 substances above reportable thresholds. See MSDS for complete information.

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Pedigree® 2500-35

Application / Curing Schedule

Preheat to 121 – 135°C / 250 - 275°F unit temperature for one hour. (recommended, but not mandatory)

Allow unit to cool to 54 – 65°C / 130 – 150°F.

Dip unit into resin for 10 – 15 minutes or until bubbling stops. Drain unit for 10 – 15 minutes.

Cure for 4 hours at 135°C / 275°F – or – 2 hours at 150°C / 302°F.

The cure schedules above are based on time after the unit reaches the specified temperature and are recommendations only. The user is responsible for determining the optimum cure conditions for his application.

Typical Mechanical Properties

Specimens cured 2 hours at 150°C / 302°F, double dip - Resin reduced to 30% N.V.

Property	Conditions	Value	Units
Build		0.5	mils
Helical Coil Bond Strength ASTM D2519 over MW 35	25°C / 77°F 150°C / 302°F	24 3	pounds pounds

Typical Electrical Properties

Property	Conditions	Value	Units
Dielectric Strength ASTM D149	25°C / 77°F	3000	volts/mil
Dielectric Strength ASTM D149	25°C / 77°F After 24 hours in water	2900	volts/mil
Dissipation Factor ASTM D150	1 kHz – 25°C / 77°F 1 kHz – 100°C / 212°F 1 kHz – 150°C / 257°F	0.001 0.03 0.39	
Volume Resistivity ASTM D150	25°C / 77°F 100°C / 212°F 150°C / 257°F	1.2×10^{16} 5.2×10^{9} 3.7×10^{8}	ohm-cm ohm-cm ohm-cm
Surface Resistivity ASTM D257	25°C / 77°F	7.1×10^{13}	ohms/sq.

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Underwriters Laboratories Recognition (ELANTAS File E75225)

Wire Construction	Helical Coil	Twisted Pair
NEMA MW16	180	240
NEMA MW26	155	155
NEMA MW28	105	130
NEMA MW35	180	200
NEMA MW76	180	155

UL Recognized Insulation Systems (ELANTAS File E87039)

Thermal Class	System
Class 130	PDG 12
Class 155	PDG 9
Class 180	PDG 14
Class 200	PDG 7
Class 220	PDG 8, 220-1
Class 240	PDG 16

The above properties are typical values and are not intended for specification use.

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