

Technical Data Sheet

Secondary Insulation

Pedigree[®] 12-0-12-I

Solvent-Borne Polyester Impregnating Resin

Pedigree® 12-0-12-I

Product Description

Pedigree® 12-0-12-I is a single-component, solvent-borne, heat-cured impregnating resin.

Areas of Application

Impregnation of motor and transformer windings

Features and Benefits

- Imide-modified for exceptional high temperature performance
- Low viscosity for excellent penetration
- Semi-flexible for noise suppression
- Excellent tank stability
- UL recognized insulation systems up to Class 240
- MIL-I-24092 QPL listed:
Grade CBH - Comp. I (Class 200)

Application Methods

- Dip-and-Bake
- Roll-through

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 twelve (12) months from the date of shipment.

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

Keep containers tightly sealed to minimize evaporation

Mix product thoroughly before use

Health / Safety

Refer to the Material Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value	Units
Viscosity	25°C / 77°F	250 - 350	cP
Non-Volatile Content	1½ g – 3 h – 135°C	48 – 51	%
Weight per Gallon	25°C / 77°F	7.6 – 8.0	pounds
Viscosity Reducer		ELAN-Plus™ BS-107 Reducer	
Flash Point	ASTM D93	24 75	°C °F

Pedigree® 12-0-12-I

Application / Curing Schedule

Preheat to 121 – 135°C / 250 - 275°F unit temperature for one hour.

Allow unit to cool to 60 – 77°C / 140 – 170°F;

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

Drain unit for 10 – 15 minutes

Cure for 2 – 10 hours at 150 – 200°C / 302 – 392°F, depending on unit size

Cure schedule is based on time after unit reaches specified temperature

Typical Mechanical Properties

Specimen cured 2 hours at 175°C / 347°F - double dip

Property	Conditions	Value	Units
Build		1.9	mils
Helical Coil Bond Strength ASTM D2519 over MW 35	25°C / 77°F 150°C / 302°F	25 1	pounds pound
Flexibility – ASTM D115	After 24 h @ 160°C	Pass 1/8-in. mandrel	

Typical Electrical Properties

Property	Conditions	Value	Units
Dielectric Strength ASTM D149	1.7 mils – 25°C / 77°F	4600	volts/mil
Dielectric Strength ASTM D149	1.7 mils – 25°C / 77°F After 24 h at 96% R.H.	3500	volts/mil
Dissipation Factor ASTM D150	1 kHz – 25°C / 77°F	.07	
Dielectric Constant ASTM D150	1 kHz – 25°C / 77°F	2.7	
Surface Resistivity ASTM D257	25°C / 77°F	4.2 x 10 ¹³	ohms/sq.
Volume Resistivity ASTM D257	25°C / 77°F	3.2 x 10 ¹³	ohm-cm

Pedigree® 12-0-12-I

Underwriters Laboratories Recognition (ELANTAS File E75225)

Wire Construction	Helical Coil	Twisted Pair
NEMA MW16	Class 220	Class 240
NEMA MW28	Class 155	Class 130
NEMA MW35	Class 220	Class 180
NEMA MW76	Class 220	Class 180

UL Recognized Insulation Systems (ELANTAS File E87039)

Thermal Class	System
Class 155	PDG 9
Class 180	PDG 180 High Voltage, PDG 14, PDG H-1
Class 200	PDG 7
Class 220	PDG 8, PDG 15, PDG 220, PDG 220 High Voltage,
Class 240	PDG 16

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

ELANTAS PDG, Inc. warrants the chemical composition of its products within stated tolerances, but does not guarantee that a product will be appropriate for any particular application. Any recommendation, performance of tests or suggestion is offered merely as a guide and is not a substitute for a thorough evaluation by the user. No representative of ELANTAS PDG, Inc. has the authority to offer a warranty that a product will perform satisfactorily in manufacturing a product and no such representation should be relied upon.