

**Technical Data Sheet**

**Secondary Insulation**

**Pedigree<sup>®</sup> 433-75 VTC**

**Precatalyzed Polyester Impregnating Resin**

## Pedigree® 433-75 VTC

### Product Description

Pedigree® 433-75 VTC is a precatalyzed, 100%-reactive unsaturated polyester resin in vinyl toluene monomer.

### Areas of Application

Impregnation of transformer and stator windings

### Features and Benefits

- High bond strength
- Excellent high temperature resistance
- Compatible with a wide variety of magnet wire constructions
- UL recognized insulation systems up to Class 220

### Application Methods

- Dip-and-Bake
- Vacuum Impregnation
- Vacuum-Pressure Impregnation

### 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.

Keep containers tightly sealed to minimize evaporation. Refrigeration is recommended for long term storage

Mix product thoroughly before use

See Technical Bulletin TI-4001 for tank maintenance instructions

### Health / Safety

Refer to the Material Safety Data Sheet.

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### Typical Properties of Material as Supplied

Property	Conditions	Value	Units
Viscosity	25°C / 77°F	600 - 900	cP
Weight per Gallon	25°C / 77°F	8.8 - 9.2	pounds
Viscosity Reducer		ELAN-Plus™ BS-217 Diluent	
Sunshine Gel Time	125°C / 257°F	15 – 20	minutes
Gel Time Adjuster		ELAN-Plus™ BS-6440 Inhibitor	
Flash Point	ASTM D93	52 126	°C °F

## Pedigree® 433-75 VTC

### Curing Schedule

Cure 4 hours at 149°C / 300°F - or -  
 2 hours at 177°C / 350°F

Cure schedule is based on time after unit reaches specified temperature

### Typical Mechanical Properties

Property	Conditions	Value	Units
Helical Coil Bond Strength ASTM D2519 over MW 35	25°C / 77°F	47	pounds
	150°C / 302°F	14	pounds
Hardness	Shore D	70 - 80	
Glass Transition Temp. (Tg)	DSC	68 - 72	°C

### Typical Electrical Properties

Property	Conditions	Value	Units
Dielectric Strength	ASTM D149 – 1.7 mils	5400	volts/mil
Dielectric Strength	ASTM D149 – 1.7 mils After 24 hours in water	2800	volts/mil
Dissipation Factor	1 kHz – 25°C / 77°F	0.01	
Volume Resistivity	1 kHz – 25°C / 77°F	1.6 x 10 <sup>15</sup>	ohm-cm

### UL Recognized Insulation Systems (ELANTAS File E87039)

Thermal Class	System
Class 130	PDG 1, 2, 12
Class 155	PDG 3, 9, 108
Class 180	PDG 14, 109, H-1
Class 200	PDG 7, 10
Class 220	PDG 15

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

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