

Technical Data Sheet
Secondary Insulation Impregnating Resin

Pedigree® 70 VTC Polyester Resin

One Component Resin, low temperature cure

Description

Pedigree 70 VTC is an unsaturated polyester resin in vinyl toluene. It is an excellent choice for impregnation of stators and transformers.

Uses

- Impregnation of stators and transformers.

Cured Properties

Pedigree 70 VTC is a high temperature polyester resin. It is included in UL recognized insulation systems up to Class 240.

Catalyst

No catalyst is required.

Recommended Cure

2 – 6 hours at 135 - 150°C (275 - 300°F) after part reaches cure temperature

Features and Benefits

- Good bond strength
- High film build
- Offers thermal ratings from 130° C to 220° C

Application Methods

- Dip and Bake
- Vacuum Pressure Impregnation (VPI)
- Vacuum Impregnation (VI)

Transportation/Storage/Shelf Life

This resin should be stored at 25°C (77°F) in a dry controlled environment out of direct sunlight. These materials 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 and invalidate shelf life. Agitate before use.

Typical Properties of Material Supplied

<i>Test</i>	<i>Value</i>	<i>Units</i>
Viscosity @ 25°C (77°F) (ASTM D2196)	275 – 450	Cp
Sunshine Gel Time @ 125°C (250°F) (ASTM D3056)Typical	15 - 30	Minutes
Flash Point (ASTM D93)Typical	53(127)	°C (°F)

TYPICAL PROPERTIES

Mechanical Properties – Cured 2 hours at 150°C(300°F), Single Dip

<i>Test</i>	<i>Value</i>	<i>Units</i>
Helical Coil Bond Strength @ 25°C (77°F) (ASTM D2519)	28	Pounds
Helical Coil Bond Strength @ 150°C (302°F) (ASTM D2519)	4	Pounds
Hardness, Shore D (ASTM 2240)	75 - 85	
Glass Transition Temperature (Tg)	53 - 57	°C

Electrical Properties

<i>Test</i>	<i>Value</i>	<i>Units</i>
Dielectric Strength – AS MADE (ASTM D149)(2.1 mils)	2800	Volts/mil
Dielectric Strength after 24 hours in water (ASTM D149)(2.1 mils)	2200	Volts/mil
Film thickness	2.1	mils
Dissipation Factor @ 25°C (77°F) 1 kHz (ASTM D150)	0.01	
Dielectric Constant @ 25°C (77°F) 1 kHz (ASTM D150)	2.1	
Volume Resistivity @ 25°C(77°F) (ASTM D257)	5.5×10^{16}	ohm-cm

UL Recognized Insulation Systems (E87039)

<i>Class</i>	<i>Systems</i>
Class 130	PDG 12, 106, 111
Class 155	PDG 9, 108
Class 180	PDG 14, 109, 180 High Voltage
Class 200	PDG 7, 10
Class 220	PDG 8, 15, 220 High Voltage
Class 240	PDG 16

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

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