ELANTAS
Electrical Insulation

Technical Data Sheet

Secondary Insulation

Pedigree® E 58 Resin
Pedigree® C 59M Hardener

Two-Component Epoxy Impregnating Resin

ELANTAS PDG, Inc.
5200 North Second Street
St. Louis, MO 63147
USA
Tel +1 314 621-5700
Fax +1 314 436-1030
info.elantas.pdg@altana.com
www.elantas.com

Pedigree® E 58 / C 59M Epoxy

Product Description

Pedigree® E 58 / C 59M is a two-component, fast curing, epoxy impregnating resin.

Areas of Application

Impregnation of motor armatures and stators

Features and Benefits

- Rapid cure on room-temperature or preheated units with no oven bake
- High bond strength
- Moisture and chemical resistant
- Low viscosity for good penetration

Application Method

- Meter-mix - Trickle

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 the product as recommended above may lead to deterioration in product performance.

Mix components thoroughly before use.

Health / Safety

Refer to the Material Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value		Units
		Pedigree® E 58 Resin	Pedigree® C 59M Hardener	
Viscosity	25°C / 77°F	300 - 400	40 - 70	cP
Weight per Gallon	25°C / 77°F	9.5 - 9.8	8.2 - 8.4	pounds
Flash Point	ASTM D93	90°C 194°F	171°C 340°F	
Mix Ratio	Parts by Weight Parts by Volume	100 100	20.0 23.3	

Mixed Properties

Property	Conditions	Value	Units
Viscosity	25°C / 77°F	200 - 300	cP
Gel Time	25°C / 77°F	5 - 10	minutes

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Curing Schedule

Mix Resin and Hardener in ratio specified above. Usable pot life is only a few minutes; meter-mix dispensing is recommended.

Trickle resin onto rotating unit. Continue rotating until resin has hardened to a non-tacky surface. Full properties will develop over 3 - 5 days.

Cure can be accelerated by preheating units to 65°C / 149°F.

Typical Mechanical Properties

Property	Conditions	Value	Units
Hardness	Shore D – 25°C / 77°F	77	
Twisted Coil Bond Strength ASTM D4882 over MW 35	25°C / 77°F 150°C / 302°F	97 13	pounds pounds
Glass Transition Temp.	DSC	57	°C
Coefficient of Thermal Expansion	Below Tg Above Tg	99 230	ppm / °C ppm / °C
Water Absorption	ASTM D570 - 25°C / 77°F	0.9	%

Typical Electrical Properties

Property	Conditions	Value	Units
Dielectric Strength	ASTM D149 – 9 mils	1600	volts/mil
Dielectric Strength	ASTM D149 – 9 mils After 24 hours in water	1600	volts/mil
Volume Resistivity	ASTM D257 – 25°C / 77°F ASTM D257 – 100°C / 212°F	4.3×10^{13} 3.3×10^{11}	ohm-cm
Dielectric Constant	1 kHz – 25°C / 77°F 1 kHz – 100°C / 212°F	4.0 6.6	
Dissipation Factor	1 kHz – 25°C / 77°F 1 kHz – 100°C / 212°F	0.02 0.27	

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UL Recognized Insulation Systems (ELANTAS File E87039)

Thermal Class	System
Class 130	PDG 12
Class 155	PDG 9
Class 180	PDG 14

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.