ELANTAS
Electrical Insulation

Technical Data Sheet

Secondary Insulation

Esterlite™ 605

Precatalyzed Polyester Impregnating Resin

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Esterlite™ 605

Product Description

Esterlite™ 605 is a precatalyzed, heat-cured unsaturated polyester resin.

Areas of Application

Impregnation of form wound motor and generator stators

Features and Benefits

- Outstanding bond strength at high temperature
- Excellent tank stability
- High flash point
- Resistant to R-22, R-134a and R-123 refrigerants
- Suitable for Class 180 service

Application Methods

Vacuum-Pressure Impregnation (VPI)

Dip-and-Bake

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.

See ELANTAS PDG Technical Bulletin *TI-4001 - Unsaturated Polyester Resin Maintenance*.

Health / Safety

Refer to the Material Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value	Units
Viscosity	25°C / 77°F	600 – 1000	cP
Weight per Gallon	25°C / 77°F	9.7 – 10.0	lbs/gal
Sunshine Gel Time	125°C / 257°F	20 – 30	minutes
Viscosity Reducer		ELAN-Plus™ BS-307 Diluent	
Flash Point	ASTM D93	> 94 > 201	°C °F
Volatile Organic Content	ASTM D6053	0.8 [1]	pounds / gallon

[1] VOC test methods and limits vary widely by regulatory jurisdiction and product application. The value above was obtained by curing a thin film under specific laboratory conditions (2 grams - 1 hour - 150°C). Contact your ELANTAS PDG representative regarding alternate methods.

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Processing / Cure Schedule

See ELANTAS PDG Processing Guides *PG-107 Vacuum Pressure Impregnating with DAP Polyester Resins* and *PG-108 Dip Impregnating with DAP Polyester Resins*

Cure 2 hours at 175°C (347°F) – or - 4 hours at 150°C (302°F) - or - 6 hours at 135°C (275°F)

A post cure of 2 hours at 180°C (356°F) is recommended for rotors, armatures and hermetic applications

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 (hermetic cure schedule)

Property	Test Method	Conditions	Value	Units
Helical Coil Bond Strength over MW 35	ASTM D2519	25°C / 77°F 150°C / 302°F	41 21	pounds pounds
Shore Hardness	ASTM D 2240	25°C / 77°F	D 85	

Typical Electrical Properties (hermetic cure schedule)

Property	Test Method	Conditions	Value	Units
Dielectric Strength	ASTM D149	25°C / 77°F - 0.5 mils	6700	volts/mil
Dielectric Strength	ASTM D149	25°C / 77°F - 0.5 mils After 24 hours in water	4300	volts/mil

Thermal Index

Wire Construction	Test Method	Helical Coil	Twisted Pair
NEMA MW35	ASTM D3145	Class 180	Class 180

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