ELANTAS
Electrical Insulation

Technical Data Sheet

Secondary Insulation

Sterling® Y-770 VTC

Precatalyzed Polyester Impregnating Resin

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Sterling® Y-770 VTC

Product Description

Sterling® Y-770 VTC is a precatalyzed, 100%-reactive unsaturated polyester resin in vinyl toluene monomer.

Areas of Application

Impregnation of motor stators and transformers

Features and Benefits

- Excellent electrical properties
- Compatible with a wide variety of magnet wire constructions
- Resilient for resistance to mechanical and thermal shock
- Suitable for Class 180 service

Application Methods

- 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

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 - 1200	cP
Weight per Gallon	25°C / 77°F	9.1 – 9.4	pounds
Viscosity Reducer		ELAN-Plus™ BS-217 Diluent	
Sunshine Gel Time	125°C / 257°F	10 – 15 [1]	minutes
Gel Time Adjuster		ELAN-Plus™ BS-6440 Inhibitor	
Flash Point	ASTM D93	53 127	°C °F

[1] Gel time may drift during shipment and storage. Refer to ELANTAS PDG Technical Bulletin *TI-4001 – Unsaturated Polyester Resin Maintenance* for adjustment instructions.

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Processing / Curing Schedule

See ELANTAS PDG Processing Guide *PG-106 – Vacuum Pressure Impregnating (VPI) Vinyl Toluene (VT) Polyester Resins.*

Cure 8 hours at 149 - 163°C / 300 - 325°F

The cure schedule above is based on time after the unit reaches the specified temperature and is a recommendation only. The user is responsible for determining the optimum cure conditions for his application.

Typical Mechanical Properties

Specimen cured 8 hours at 163°C / 325°F

Property	Test Method	Conditions	Value	Units
Hardness	ASTM D2240	Shore D	75	

Typical Electrical Properties

Property	Test Method	Conditions	Value	Units
Dissipation Factor	ASTM D150	25°C / 77°F – 60 Hz 100°C / 212°F – 60 Hz 150°C / 302°F – 60 Hz	0.01 0.02 0.02	
Dielectric Constant	ASTM D150	25°C / 77°F – 60 Hz 100°C / 212°F – 60 Hz 150°C / 302°F – 60 Hz	3.5 4.9 4.9	

Underwriters Laboratories Recognition (ELANTAS File E75225)

Wire Construction	Helical Coil	Twisted Pair
NEMA MW16	Class 180	Class 240
NEMA MW24	Class 180	Class 180
NEMA MW28	Class 130	Class 130
NEMA MW35	Class 180	Class 180

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