

Technical Data Sheet

Secondary Insulation

RanVar™ B7-373 VTC

Precatalyzed Polyester Impregnating Resin

RanVar™ B7-373 VTC

Product Description

RanVar™ B7-373 VTC is a pre-catalyzed, 100%-reactive unsaturated polyester resin in vinyl toluene monomer.

Areas of Application

Impregnation of motor and transformer windings

Features and Benefits

- Precatalyzed
- Excellent electrical properties
- Compatible with a wide variety of magnet wire constructions
- Semi-flexible for noise suppression
- 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 *Unsaturated Polyester Resin Maintenance* for tank maintenance instructions

Health / Safety

Refer to the Material Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value	Units
Viscosity	25°C / 77°F	900 – 1200	cP
Weight per Gallon	25°C / 77°F	8.7 - 9.1	pounds
Viscosity Reducer		ELAN-Plus™ BS-217 Diluent	
Sunshine Gel Time	118°C / 245°F	15 - 30 ^[1]	minutes
Gel Time Adjuster		ELAN-Plus™ BS-374 Inhibitor	
Flash Point	ASTM D93	53 127	°C °F
Volatile Organic Content	ASTM D6053-96	1.8 ^[2]	pounds / gallon

^[1] Gel time may drift during shipment and storage. Refer to Technical Bulletin TI-4001 for adjustment instructions.

^[2] 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.

RanVar™ B7-373 VTC is a 100% reactive system. Total emissions are dependent on the method of application, air flow, processing temperatures and the type of unit being produced.

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Application / Curing Schedule

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

Cure 2 hours at 163°C / 325°F – or – 4 hours at 150°C / 302°F

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

Property	Test Method	Conditions	Value	Units
Helical Coil Bond Strength over MW 35	ASTM D2519	25°C / 77°F 150°C / 302°F	27 3	pounds pounds
Hardness	Shore D	25°C / 77°F	85	

Typical Electrical Properties

Property	Test Method	Conditions	Value	Units
Dielectric Strength	ASTM D149	25°C / 77°F – 1.8 mils	4100	volts/mil
Dielectric Strength	ASTM D149	25°C / 77°F – 1.8 mils After 24 hours in water	4000	volts/mil

UL Recognized Insulation Systems (ELANTAS File E87039)

Thermal Class	System
Class 130	Class 130 - MEGA I
Class 155	MEGA II
Class 180	MEGA III, W-180-1, WEHV III, WELN-180
Class 220	MEGA V, WEHV I, WEHV II

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.