

Technical Data Sheet

Secondary Insulation

Ripley™ E 468-2FC
(E 468-2FC Fast Cure Impregnant)

Single-Component Epoxy Impregnating Resin

Ripley™ E 468-2FC

Product Description

Ripley™ E 468-2-FC is a single-component, heat-cured, 100% solids epoxy impregnating resin.

Areas of Application

The Ripley™ E 468 product line is the industry standard for impregnation of transformers of all sizes

Features and Benefits

- Flexible for excellent noise suppression
- No catalyst required
- High flash point
- UL recognized insulation systems up to Class 240

Application Methods

- Vacuum-Pressure Impregnation
- Vacuum Impregnation
- 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 six (6) months from the date of shipment.

Usable life may be extended by refrigerated storage at 5°C / 41°F.

For best results, VPI storage tanks should have a replenishment rate of 10% or more per month and employ cooling systems to maintain the resin at 20°C / 68°F or below.

Mix 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	300 – 700	cP
Weight per Gallon	25°C / 77°F	8.4 – 8.8	pounds
Sunshine Gel Time	135°C / 275°F	12 – 20	minutes
Flash Point	ASTM D93	> 94 > 201	°C °F

Curing Schedule

Preheat units, as necessary, to remove moisture and set tapes. Allow units to cool to below 30°C / 86°F before immersion to promote good penetration while not overheating the resin.

Cure VPI-treated units for 4 hours at 135°C / 275°F – or –
3 hours at 150°C / 302°F

Cure schedule is based on time after unit reaches specified temperature

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Typical Mechanical Properties

Specimens cured 4 hours at 135°C / 275°F

Property	Conditions	Value	Units
Tensile Strength ASTM D638	25°C / 77°F	1300	psi
Elongation ASTM D638	25°C / 77°F	49	%
Hardness – Shore D	25°C / 77°F	45 – 55	
Glass Transition Temp.	TMA	46 – 50	°C
Coefficient of Thermal Expansion	Below Tg	144	ppm / °C
Coefficient of Thermal Expansion	Above Tg	234	ppm / °C

Typical Electrical Properties

Property	Conditions	Value	Units
Dielectric Strength ASTM D149	0.25 mils – 25°C / 77°F	2200	volts/mil
Dielectric Strength ASTM D149	0.25 mils – 25°C / 77°F After 24 hours in water	1800	volts/mil
Dissipation Factor ASTM D150	1 kHz – 25°C / 77°F	0.02	
Dielectric Constant ASTM D150	1 kHz – 25°C / 77°F	3.0	
Volume Resistivity ASTM D257	25°C / 77°F	5.1×10^{15}	ohm-cm

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UL Recognized Insulation Systems (ELANTAS File E87039)

Thermal Class	System
Class 130	DASH 2: B-1, B-2, B-2Z, B-2Z-1, B-5, B-8, B-10, B-11, B-13, B-14, B-19, BR-1, BR-2, PDG 12, PDG 116
Class 155	DASH 2: F-1, F3, F4, F-4A, PDG 117
Class 180	DASH 2: H-1, H-2, H-3, H-4, H-5, H-8, HR-1, HR-2, HR-3, HR-4, PDG 14, PDG 180 High Voltage
Class 200	DASH 2: N-1, N-2, N-3, N-4, N-6, N-2HV, PDG 10, MEGA IV
Class 220	DASH 2: R-1, R-2, R-3, R-5, HV-1, HV-2, PDG 8, PDG 220-1, PDG 220 High Voltage, PDG 15
Class 240	DASH 2: S-1

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

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