Preliminary Technical Data Sheet

Electrical Insulation Materials

CONAPOXY® DPFR-29589

Two-Component Epoxy Potting Compound

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CONAPOXY® DPFR-29589

Product Description

CONAPOXY® DPFR-29589 Part A Resin and CONAPOXY® EA-02 Part B is a two-component, filled, flame-retardant epoxy potting system.

Areas of Application

Potting and encapsulation of electrical / electronic devices such as modules, transformers, and coils as well as strain sensitive applications.

Features and Benefits

- UL94 V-0, UL94 5VA
- Low exotherm
- Excellent thermal shock resistance
- Good electrical properties with very good arc resistance

Application Methods

- Hand-mix Bench Potting / Casting
- Meter-mix Bench Potting / Casting
- Meter-mix Vacuum Potting / Casting

Transportation / Storage

Store at 20 – 30°C / 68 – 85°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.

This product is sensitive to moisture and atmospheric humidity. Containers, once opened, should be used immediately or blanketed with dry air or nitrogen (CONAP® Dri-Purge) before resealing.

Mix and degas individual components thoroughly prior to use.

CONAPOXY DPFR-29589 Part A Resin contains filler and should be well mixed prior to use until the filler is redistributed homogeneously.

Health / Safety

Refer to the Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value	
		CONAPOXY® DPFR-29589 Part A Resin	**CONACURE® EA-02 Part B Hardener**
Viscosity	25°C / 77°F	40,000 cP	55 cP
Specific Gravity	25°C / 77°F	1.59	1.0
Color		Black	Amber
Mix Ratio	Parts by weight Parts by volume	100 100	5.3 8.6
Flash Point	ASTM D93	>94°C >201°F	>94°C >201°F

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Typical Properties of Mixed Materials

Property	Conditions	Value	Units
Mixed Viscosity (initial)	25°C / 77°F	14,000	cP
Gel Time	25°C / 77°F	90	Minutes
Peak Exotherm	200g @ 25°C / 77°F	55 131	°C °F

Application / Curing Schedule

Mix the DPFR-29589 Part A and EA-02 Part B until homogeneous. Components may be preheated up to 60°C if reduced viscosity is required. If hand-mixing, degas at >27 in. Hg before use.

Cure 24 hours at 25°C / 77°F – or – 2 hours at 60°C / 140°F for maximum properties.

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 their application.

Typical Physical Properties

Property	Test Method	Conditions	Value	Units
Color		25°C / 77°F	Black	
Shore Hardness	ASTM D2240	25°C / 77°F	D 85	
Tensile Strength	ASTM D412	25°C / 77°F	6,000	psi
Compressive Strength	ASTM D695	25°C / 77°F	17,000	Psi
Linear Shrinkage	MIL-M-24041C	25°C / 77°F	0.7	%
Glass Transition Temperature		DSC	76 169	°C °F
Coefficient of Thermal Expansion			37	ppm
Thermal Conductivity			0.6	W / m·K
Flammability	UL94	4.8 mm 6.0 mm	V-0, 5VA V-0	

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Typical Electrical Properties

Property	Test Method	Conditions	Value	Units
Dielectric Strength	ASTM D149	25°C / 77°F	400	volts / mil
Dielectric Constant	ASTM D150	100 Hz @ 25°C / 77°F	6.3	
Dissipation Factor	ASTM D150	100 Hz @ 25°C / 77°F	0.06	
Volume Resistivity	ASTM D257	25°C / 77°F	2.0×10^{15}	ohm-cm
Surface Resistivity	ASTM D257	25°C / 77°F	2.0×10^{15}	ohm

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