

Technical Data Sheet

Electrical Insulation Materials

EpoxyLite[®] E 6107 Hi Temp

Two-Component Epoxy Impregnating Resin

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EpoxyLite® E 6107 Hi Temp Epoxy

Product Description

EpoxyLite® E 6107 Hi Temp Epoxy is a heat-cured, two-component system consisting of a viscous liquid resin and fluid liquid hardener.

Areas of Application

Impregnation of motor armatures, stator and coils

Impregnation of glass-wrapped electrical and structural components

Features and Benefits

- Maintains excellent electrical and physical properties to above 200°C / 392°F
- Withstands temperatures up to 316°C / 600°F for short periods
- Excellent adhesion to metals, ceramics and most plastics
- Resistant to acids, alkalis, and solvents
- Skydrol resistant
- Provided in premeasured kits

Application Methods

- Vacuum Impregnation
- Vacuum-Pressure Impregnation
- Bench Casting

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 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 nitrogen before resealing.

Mix individual components thoroughly before use.

Health / Safety

Refer to the Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value		Units
		EpoxyLite® E 6107 Hi Temp Resin	EpoxyLite® C 6107 Hi Temp Hardener	
Viscosity	25°C / 77°F	18,000 - 28,000	150 - 400	cP
Weight per Gallon	25°C / 77°F	9.8 - 10.2	10.2 - 10.6	pounds
Flash Point	ASTM D93	> 94 > 201	> 94 > 201	°C °F
Mix Ratio	Parts by weight	100	100	

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Mixing / Application

Best results are obtained by warming the Resin to 65 – 85°C / 150 – 185°F before addition of the Hardener. This will lower the viscosity and facilitate release of bubbles.

Mix the Hardener into the warm Resin with mechanical agitation until homogeneous (approximately three minutes). Pot life of the mixture is 2 days or longer at room temperature and approximately 30 minutes at 121°C / 250°F.

Vacuum application is recommended for best penetration. Loosely wound structures using open-weave glass or other insulation material may be bench cast at 93°C / 200°F.

Mixed material that is not used immediately must be stored in a container free of air or blanketed with nitrogen. Pot life can be extended with refrigeration (5°C / 41°F) to several days or with freezing (-40°C / -40°F) to several months.

Refrigerated or frozen containers should be thawed to 16°C / 60°F or higher before opening to avoid moisture condensation.

NOTE: Proper surface preparation is critical to obtaining optimum product performance. See ELANTAS North America Technical Bulletin TI-3000 *Surface Preparation Recommendations*.

EpoxyLite® E 6107 Hi Temp Epoxy is highly adhesive. Surfaces that may come into accidental contact with it during processing should be pretreated with a suitable release agent.

Curing Schedule

Cure as follows:

6 - 8 hours at 121°C / 250°F – or – 3 hours at 121°C / 250°F plus 3 hours at 135°C / 275°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 their application.

Typical Mechanical Properties - specimens cured 3 h at 121°C / 250°F plus 3 h at 135°C / 275°F

Property	Method	Conditions	Value	Units
Hardness		Shore D	90	
Tensile Strength	ASTM D638	25°C / 77°F	9,800	psi
Flexural Strength	ASTM D790	25°C / 77°F	17,000	psi

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Typical Electrical Properties - specimens cured 3 h at 121°C / 250°F plus 3 h at 135°C / 275°F

Property	Method	Conditions	Value	Units
Dielectric Strength	ASTM D149	25°C / 77°F – 125 mils	480	volts/mil
Dissipation Factor	ASTM D150	1 kHz – 25°C / 77°F	0.004	
Dielectric Constant	ASTM D150	1 kHz – 25°C / 77°F	3.4	
Volume Resistivity	ASTM D257	25°C / 77°F	4.2 x 10 ¹⁶	ohm-cm

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

ELANTAS North America, 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 North America, Inc. has the authority to offer a warranty that a product will perform satisfactorily in manufacturing an article and no such representation should be relied upon.

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