ELANTAS
Electrical Insulation

Technical Data Sheet

Electronic & Engineering Materials

Epoxylite® E 8121 Hi Temp Epoxy

Two-Component Epoxy Adhesive

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Epoxylite ® E 8121 Hi Temp Epoxy

Product Description

Epoxylite® E 8121 Hi Temp Epoxy is a heat-cured, two-component system consisting of a viscous liquid resin and a finely divided powder hardener.

It is provided in pre-measured kits.

Areas of Application

Cementing applications requiring high thermal resistance and a thin bond line

Particularly suited for attachment of strain gages

Features and Benefits

Maintains excellent electrical and physical properties up to 260°C / 500°F

Remains serviceable to 315°C / 600°F or higher for short periods

Excellent adhesion to metals, ceramics and most plastics

Resistant to acids, alkalis and solvents

Application Methods

Premix Resin component, then mix the entire kit (Resin and Hardener) with mechanical agitation until homogeneous.

Apply with spatula or syringe for bonding and sealing applications.

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 twelve (6) months from the date of shipment.

Failure to store the product as recommended above may lead to deterioration in product performance.

Health / Safety

Refer to the Material Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value		Units
		Epoxylite® E 8121 Resin	**Epoxylite® C 8121 Hardener**	
Viscosity	25°C / 77°F	30,000 – 50,000	Powder	cP
Viscosity (mixed)	25°C / 77°F	200,000 – 400,000		cP
Weight per Gallon	25°C / 77°F	10.4 – 10.8	14.9 – 15.3	pounds
Flash Point	ASTM D93	> 94 > 201	> 94 > 201	°C °F
Mix Ratio	Parts by weight	100	50	

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Curing Schedule

Mixed material has a pot life of sixteen hours at room temperature. Pot life can be extended with refrigeration (5°C) to several days, or with freezing (-40°C) to several months.

Any of the following cure cycles may be used:

16 hours at 93°C / 200°F – or –
4 hours at 121°C / 250°F – or –
1 hour at 177°C / 350°F – or –
30 minutes at 204°C / 400°F

Typical Mechanical Properties

Specimen cured at 177°C / 350°F

Property	Conditions	Value	Units
Hardness	Shore D	95	
Glass Transition Temp. (Tg)	TMA	220	°C
Coefficient of Thermal Expansion	Below Tg Above Tg	45 200	ppm / °C ppm / °C
Lap Shear Strength	ASTM D1002 - 25°C / 77°F	2,000	psi
Linear Shrinkage	ASTM D2566	2	%

Typical Electrical Properties

Specimen cured at 177°C / 350°F

Property	Conditions	Value	Units
Dielectric Strength	ASTM D149 – 25°C / 77°F (125 mils)	560	volts/mil
Volume Resistivity	ASTM D257 – 25°C / 77°F	1×10^{16}	ohm-cm
Dissipation Factor	1 kHz – 25°C / 77°F	.006	

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