

Technical Data Sheet

Electronic & Engineering Materials

ELAN-Tron[®] E 449 Resin
ELAN-Tron[®] C 49 Hardener

Two-Component Epoxy Adhesive System

ELAN-Tron[®] E 449 Resin / C 49 Hardener

Product Description

ELAN-Tron[®] E 449 Resin / C 49 Hardener is a filled, 100%-solids, two-component epoxy resin system.

Areas of Application

- Bonding of electrical components
- Repair of motor housings and castings
- Seam sealing in pressure processing equipment
- Repair of plastic, porcelain, tile and ceramics.

Features and Benefits

- Non-flowing paste
- Room temperature cure

Application Methods

Mix Resin and Hardener in recommended ratio until homogeneous. Apply with spatula, trowel or stiff brush.

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 (12) months from the date of shipment.

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

Mix individual components thoroughly before use.

Health / Safety

Refer to the Material Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value		Units
		ELAN-Tron [®] E 449 Resin	ELAN-Tron [®] C 49 Hardener	
Viscosity – 2 rpm	25°C / 77°F	Paste	220,000-4200,000	cP
Viscosity – 20 rpm	25°C / 77°F	Paste	90,000-180,000	cP
Weight per Gallon	25°C / 77°F	13.3 - 13.7	17.1 - 17.5	pounds
Flash Point	ASTM D93	> 94 > 201	62 144	°C °F
Mix Ratio	Parts by weight Parts by volume	100 100	110 86	

Curing Schedule

Mixed material has a pot life of one to four hours at room temperature. It will harden within about six hours and will develop full properties within three to five days.

Cure may be accelerated by heating to 60°C / 140°F for three hours.

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Typical Mechanical Properties

Specimen cured five days at 25°C / 77°F

Property	Conditions	Value	Units
Linear Shrinkage	ASTM D2566	0.05	%
Water Absorption	ASTM D570 24 hours at 25°C / 77°F	0.14	%
Hardness	Shore D	85	
Glass Transition Temp. (Tg)	By DSC	59	°C
Coefficient of Thermal Expansion	Below Tg	55	ppm / °C
Weight Loss	24 hours at 180°C / 356°F	1.2	%

Typical Electrical Properties

Specimen cured five days at 25°C / 77°F

Property	Conditions	Value	Units
Volume Resistivity ASTM D257	25°C / 77°F 100°C / 212°F	4.6 x 10 ¹⁰ 6.0 x 10 ⁹	ohm-cm ohm-cm
Dielectric Constant ASTM D150	1 kHz – 25°C / 77°F 1 kHz – 100°C / 212°F	2.4 3.5	
Dissipation Factor ASTM D150	1 kHz – 25°C / 77°F 1 kHz – 100°C / 212°F	.01 .11	

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.