

Technical Data Sheet

Electrical Insulation

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 adhesive 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

- 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 Safety Data Sheet.

See ELANTAS PDG Technical Bulletins *TI-100 - Handling Precautions for Epoxy Resins* and *TI-4005 - Epoxy Reaction Potential Hazards* for additional information.

Typical Properties of Material as Supplied

Property	Conditions	Value		Units
		ELAN-Tron® E 449 Resin	ELAN-Tron® C 49 Hardener	
Viscosity	25°C / 77°F	150,000 – 250,000	90,000 - 170,000	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	

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Regulatory Information

Property	Test Method	Value	Units
Volatile Organic Content	ASTM D6053	< 0.1 ^[1]	pounds / gallon
RoHS Compliance	ELAN-Tron [®] E 449 Resin and ELAN-Tron [®] C 49 Hardener comply with Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 (RoHS 2.0) as amended 31 March 2015.		

^[1] VOC test methods and limits vary widely by regulatory jurisdiction and product application. The value above was obtained by curing a thin film under specific laboratory conditions (2 grams - 1 hour - 150°C). Contact your ELANTAS PDG representative regarding alternate methods.

Application / Curing Schedule

Mix Resin and Hardener in recommended ratio until homogeneous.

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.

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 his application.

Typical Mechanical Properties - Specimens cured five days at 25°C / 77°F

Property	Test Method	Conditions	Value	Units
Shore Hardness	ASTM D2240	25°C / 77°F	D 85	
Linear Shrinkage	ASTM D2566		< 1	%
Water Absorption	ASTM D570	24 h at 25°C / 77°F	0.14	%
Glass Transition Temp. (T _g)	ASTM D3418	DSC	59	°C
Coefficient of Thermal Expansion	ASTM E831	Below T _g	55	ppm / °C
Weight Loss		24 h at 180°C / 356°F	1.2	%

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Typical Electrical Properties - Specimens cured five days at 25°C / 77°F

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

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