Technical Data Sheet

Electronic & Engineering Materials

ELAN-Tron® E 451 Resin
ELAN-Tron® C 105 Hardener

Two-Component Epoxy Adhesive / Sealant

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ELAN-Tron® E 451 Resin / C 105 Hardener

Product Description

ELAN-Tron™ E 451 / C 105 is a two-component, room temperature curing, 100%-solids epoxy resin system.

Areas of Application

General sealing, patching and bonding of electrical equipment

Sealant for armature and stator end windings

Bus bar and switchgear coating

Features and Benefits

- Convenient 1:1 mix ratio
- Thixotropic for vertical surfaces
- Room temperature or low bake cure
- Long pot life
- Chemical and moisture-resistant

Application Methods

Brush, spatula or putty knife

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 this 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 451 Resin	**ELAN-Tron® C 105 Hardener**	
Viscosity	25°C / 77°F	Thixotropic Paste	Thixotropic Paste	
Color		Opaque off-white	Opaque off-white	
Weight per Gallon	25°C / 77°F	13.8 – 14.2	12.0 – 12.4	pounds
Flash Point	ASTM D93	> 94 > 201	> 94 > 201	°C °F
Mix Ratio	Parts by weight	100	100	

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Typical Properties of Mixed Materials

Property	Conditions	Value	Units
Viscosity	25°C / 77°F	Thixotropic Paste	
Pot Life	25°C / 77°F – 250 grams	1½	hours
Gel Time	110°C / 230°F	7 - 10	minutes

Curing Schedule

Mixed resin cures tack-free within 10 – 16 hours at room temperature and will develop full room temperature strength after 4 – 5 days.

Optionally, after the resin has gelled, a short bake at low temperature, such as 2 - 3 hours at 80°C / 175°F or 1 - 2 hours at 110°C / 230°F will further enhance physical and electrical properties.

If ambient temperature is below 20°C / 68°F, apply external heat.

Cure schedule is based on time after the unit reaches the specified temperature.

Typical Mechanical Properties

Specimens cured 16 hours at 25°C / 77°F plus 2 hours at 110°C / 230°F

Property	Conditions	Value	Units
Hardness	Shore D	67	
Water Absorption	24 hours @ 25°C / 77°F	+ 0.2	%
Water Absorption	24 hours in boiling water	+ 0.4	%
Weight Loss	24 hours @ 180°C / 356°F	0.9	%

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.