

TECHNICAL DATA SHEET

EP-837 TWO PART STAKING EPOXY

EP-837 is designed for **component attachment, termination and other applications** in:

- hybrid circuits
- membrane keypads
- electromechanical assemblies

where low **temperature curing conditions** are required.

DESCRIPTION

- suitable for dot dispense or stencil applications, and exhibits excellent adhesion to most metal and plastic substrates
- has excellent temperature resistance, toughness, and allows for differences in coefficients of thermal expansion between two bonded substrates
- Lateral component push-off testing on print treated polyester substrates (PET) show that EP-837 has 30 to 40% greater bond strength than other conductive epoxy adhesives.
- Convenient mix ratios and packaging in pre-weighed amounts allow for ease of use in fast paced production environments. EP-837 is also available in dual, pre-weighed and sealed plastic pouches.
- Conductive Compounds, Inc. can modify the cure speed, working time, or rheology of EP-837 to make it more compatible with your unique manufacturing process.

EP-837 is compatible with all of our silver conductive inks, UV curable encapsulants, dielectrics and conformal coatings. Contact us for suitability of use with other materials.

TYPICAL PROPERTIES

Appearance	Part A	Clear thick liquid
	Part B	Straw colored liquid
Mix Ratio		100 parts A (by weight) to 55 parts B
Shelf Life (Unmixed)		6 months in unopened container
Pot Life (25 Grams, Room Temperature)		> 6 hours
Thin Film Set Time (.001" @ 25°C)		>12 hours
Total % NV Solids		100%
Hegman Gauge		<10 μ
Volume Resistivity (ref. ASTM D-257)		<1.0 x 10 ¹⁵ Ω -cm
Operating Temperature Range (Fully Cured)		-55°C To +125°C continuous intermittent at higher temperatures

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Guidelines are intended to provide a starting point for evaluation.

Conductive Compounds, Inc. recognizes that each customer's manufacturing process is unique, and we are available to provide technical assistance to resolve your processing issues. Call us to discuss your application in more detail.

The properties are accurate to the best of our knowledge and Conductive Compounds, Inc. makes no guarantees for customer specifications established in applications where this product is used. Customer assumes responsibility for determining fitness of use in their particular application.

Curing Schedule		
<u>Time at Temperature</u>	<u>90% Cure</u>	<u>Complete Cure</u>
20°C	48 hours	72 hours+
140°C	10-20 minutes	30-40 minutes

At 90% cure, the assembly can generally be handled carefully without the danger of damaging the adhesive bond. The epoxy will continue to cure at room temperature after removal from the oven. Cure times above are intended as guidelines and are dependent on the actual glue line being held at the given temperatures.

*Curing at room temperature only is not recommended. Heat curing gives increased bond strength.

Application Guidelines

- Dot dispensing can be accomplished utilizing positive displacement or pneumatic actuated equipment. EP-837 exhibits quick break-off after dispensing in high speed automated production processes. In small volume production environments, EP-837 can be mixed and manually loaded into syringes for dispensing with hand held equipment.
- The rheological properties of EP-837 allow for accurate and repeatable dot geometries over a four hour window. While the viscosity of the mixed material will change over four hours, most dot dispense equipment can easily compensate for the rheological changes to accurately maintain dot configuration.

Packaging

- EP-837 is available in pre-weighed open containers, or pre-weighed, separated plastic pouches (CC-Paks). There is no minimum purchase quantity with either packaging configuration, and open containers can be ordered with any specified amount of material.

Health & Safety

- Products manufactured by Conductive Compounds, Inc. are intended for use in an industrial environment by trained personnel. Please follow proper health/safety processes regarding storage, handling and processing of the products.