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Innovative Chemistry For High-Tech Applications

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EP-600
SILVER FILLED ELECTRICALLY CONDUCTIVE
TWO PART EPOXY ADHESIVE

EP-600 is a unique, two part electrically conductive epoxy adhesive used for component attachment, termination and other applications in hybrid circuits, membrane keypads and other electromechanical assemblies. The thixotropic properties and non-stringing characteristics of EP-600 make it an ideal material for high-speed, dot dispense processes where low temperature curing is required. EP-600 allows automated dot dispense processes to run up to 70% faster because of its low viscosity and non-stringing characteristics. EP-600 exhibits excellent adhesion to most metal and plastic substrates, 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 mylar substrates show that EP-600 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-600 is also available in dual, pre-weighed and sealed plastic pouches, or pre-mixed and frozen in syringes. Conductive Compounds, Inc. can modify the cure speed, working time, or rheology of EP-600 to make it more compatible with your unique manufacturing process.

EP-600 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 -AØ Part -BØ	Thixotropic Dark Silver Colored Paste Straw Colored Liquid
Mix Ratio		100 Parts -AØ (By Weight) To 10 Parts -BØ
Shelf Life (Unmixed)		6 Months In Unopened Container
Pot Life (25 Grams, Room Temperature)		> 4 Hours
Thin Film Set Time (.001" @ 25° C)		>12 Hours
Total % NV Solids		100%
Hegman Gage		<100 µ
Volume Resistivity (ref. ASTM D-257)		<1.0 x 10 ⁻³ Ω-cm
Operating Temperature Range (Fully Cured)		-55° C To +125° C Continuous Intermittent at higher temperatures

<u>Curing Schedule (Time At Temperature)</u>	<u>90% Cure</u>	<u>Complete Cure</u>
20° C	24 hours	48 hours
65° C	120 minutes	160 minutes
75° C	40 minutes	60 minutes
100° C	15 minutes	25 minutes
140° C	5 minutes	7 minutes

At 90% cure, the assembly can generally be handled carefully without the danger of damaging the adhesive bond. Adhesive 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 temperature.

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

MORE INFORMATION ON REVERSE SIDE

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APPLICATION GUIDELINES

Dot dispensing can be accomplished utilizing positive displacement or pneumatic actuated equipment. EP-600 exhibits quick break-off after dispensing, and will not cause shorts from stringing in high speed automated production processes. In small volume production environments, EP-600 can be mixed and manually loaded into syringes for dispensing with hand held equipment.

The rheological properties of EP-600 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. Although it is not generally recommended, some customers are able to use EP-600 for six hours after mixing.

PACKAGING

EP-600 is available in pre-weighed open containers, and pre-weighed, separated plastic pouches (CC-Packs). There is no minimum purchase quantity with these packaging configurations, and we can provide open containers with any specified amount of material. We also offer EP-600 premixed, vacuum degassed and frozen in syringes. The amount of material contained in each syringe can be specified by the customer, so that the entire syringe is used up within four hours on the production line. This packaging option requires a minimum of 100 syringes per shipment. Shelf life of premixed and frozen material is 30 days when stored at 640°C.

The above 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 and the above 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.