



EP-600 TWO-PART CONDUCTIVE EPOXY

Description

EP-600 two-part silver-filled conductive epoxy is designed for component attachment, termination and other applications in hybrid circuits, membrane keypads and other electromechanical assemblies.

Features

- Low temperature cure
- Thixotropic properties, low viscosity & non-stringing characteristics make it ideal for high-speed dot-dispense processes which can run up to 70% faster
- Exhibits outstanding adhesion to most metal & plastic substrates
- Excellent temperature resistance & toughness allows for differences in coefficients of thermal expansion between bonded substrates
- Lateral component push-off testing on print-treated mylar substrates show EP-600 to have 30 to 40% greater bond strength than other conductive epoxy adhesives
- Convenient mix ratios and packaging options
- Recommended for use with our UV-3010 UV Curable Coating/Encapsulant for staking LEDs, pins and wires
- Compatible with all of our other silver conductive inks and dielectrics



EP-600 Pre-Measured CC-Pak Packaging

TYPICAL PROPERTIES

Appearance	Part A: Silver paste Part B: Amber colored liquid
Mixed Viscosity: Brookfield DV-III Ultra, 25°C SC4-14 spindle @ SR 10	10,000 - 30,000 cP
Pot Life: 10 grams, room temperature	>4 hours
Hegman Gauge	≤50 μm
Volume Resistivity	<1.0 x 10 ⁻³ ohm-cm
Total % NV Solids	100%
Mix Ratio (by weight)	100 parts A to 10 parts B



Packaging

Convenient mix ratios and packaging in pre-weighed amounts allow for ease of use in fast-paced production environments. EP-600 is available in pre-weighed and sealed plastic dual pouches known as CC-Paks, or in separate 100-gram jar bulk kits. CC-Paks are easiest for mixing right in the package and the most popular packaging configuration. They are available in 5- or 10-gram pre-measured weights.

Mixing

CC-Pak packaging is a two-sided burst pouch with a center seal which separates Part A from Part B. It requires a small amount of pressure by hand to break the center seal for mixing. Push the silver Part A side to the hardener Part B side. Move the material back and forth several times to blend so the material looks completely homogenous which should take about 10 to 20 seconds. Do not overmix and be sure that both sides are mixed completely.

Bulk jars are available in a minimum packaging of 100 grams as a kit. A kit is one jar of Part A and one jar of Part B. To use less than the full amount packaged in jars and to attain the proper mix ratio of Part A to Part B, use a scale capable to measure out to three decimal points.

Application Guidelines

Dot dispensing can be accomplished utilizing positive displacement or pneumatic actuator 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 handheld equipment.

The rheological properties of EP-600 allow for accurate and repeatable dot geometries over a 4-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 6 hours after mixing.

Pot Life

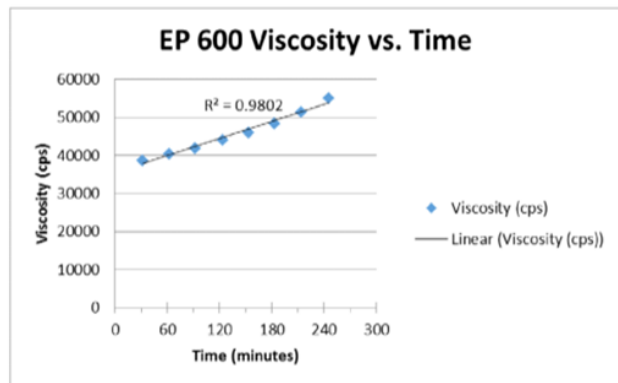


Figure 1 Test Standard: Shear Rate 2; Temp 25°C; Spindle SC4-14

Curing

At 90% cure, the assembly can generally be handled carefully without the danger of damaging the adhesive bond. The adhesive will continue to cure at room temperature after removal from the oven. Cure times are intended as guidelines, and are dependent on the actual glue line being held at the given temperature. Heat curing gives increased bond strength. Curing at room temperature only is NOT recommended. See the Curing Schedule on the next page.



CURING SCHEDULE (time @ temperature)

Temperature	90% Cure	100% Cure
75°C	40 minutes	60 minutes
100°C	15 minutes	25 minutes
140°C	5 minutes	7 minutes

Storage and Shelf Life

Shelf life is 6 months in unopened container, if stored in a dry area at 25°C (room temperature). Do not use product after the expiration date.

Disposal

The material and its container must be disposed in accordance with all local, state, federal and/or international regulations.

Handling

Consult Safety Data Sheet (SDS) for details on the handling procedures and product hazards prior to use. If you have any questions regarding handling precautions or product hazard, please email productsafety@kayakuAM.com.

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