



Creative Materials, Inc.
141 Middlesex Road
Tyngsboro, MA 01879

T 978.649.4700
F 978.649.2040

121-23

ANISOTROPICALLY CONDUCTIVE, B-STAGEABLE, EPOXY ADHESIVE

DESCRIPTION: 121-23 is a screen-printable, B-stageable, anisotropically conductive, epoxy adhesive suitable for application by screen-printing, dipping and syringe dispensing. This product features excellent adhesion to a variety of metallic contact pad compositions as well as other substrates. Unlike conventional conductive materials, this product is very resistant to solvents, heat, and thermocycling. Applications for 121-23 include, but are not limited to, conductive splicing of ribbon cables, electrical attachment of surface mounted devices and bonding of flex circuits to PC boards and electroluminescent panels. This product is useful in application where shorts between closely spaced contacts are a concern. This system features excellent thermal stability.

PROPERTIES:

Viscosity (cps)	35,000-40,000
Filler	Silver
Glass Trans. Temp. (°C)	105
Volume Resistivity (ohm-cm)	
• Z- Axis:	0.001
• X and Y Axis:	1 x10 ¹²
Solderable	No
Useful Temperature Range (°C)	-55 to 200
Lap Shear Strength (psi)	1000

SAFETY AND HANDLING: Use with adequate ventilation. Keep away from sparks and open flames. Avoid prolonged contact with skin and breathing of vapors. Wash with soap and water to remove from skin.

SUGGESTED HANDLING AND CURING: Material is ready to use as received. Store frozen to maintain consistent flow properties. Allow material to warm up to room temperature before opening container. Mix well in the container to resuspend filler. As an adhesive, apply the 121-23 to one or both parts, then mate the parts and cure for one (1) hour at 150°C, or 30 minutes at 175°C, while maintaining pressure. The amount of pressure required should be experimentally determined based on the curing temperature and geometry of the components. Typically a pressure of 100 psi, or greater is required. Allow to cool to room temperature before removing pressure. 121-23 can be thinned with small amounts of CMI# 113-12 thinner.

STORAGE: Shelf Life -2 months at 25°C, or 12 months at -10°C.

B-STAGE PROCEDURE: Apply adhesive to substrate. Next apply heat to advance the curing to the non-tacky stage, when cooled to room temperature. A temperature of 120°C for 10 minutes is required. B-Stage time is mass related. User is encouraged to experiment for optimum drying time at a given temperature. Store on release liner to prevent contamination.

STORAGE B-STAGED FILM: Shelf Life - 1 month @ 25°C; or 12 months @ -10°C

BONDING PROCEDURE: To use, carefully align parts to be bonded, apply pressure. The amount of pressure required, should be experimentally determined based on the curing temperature and geometry of the components. Typically a pressure of 100 psi or greater is required. Cure for 30 minutes at 175°C, or 1 hour at 150°C. (Note cure times given are mass related, timing should start after the adhesive and substrate adhesive and substrates reach curing temperature.)

All technical information is based on data obtained by CMI personnel and is believed to be reliable. No warranty is either expressed or implied with respect to results or possible infringements on patents.

REVISION DATE: 4/2/02 REVISION: B