

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

T 978.649.4700
F 978.649.2040

117-49

PAD-PRINTABLE, B-STAGEABLE, THERMALLY CONDUCTIVE, EPOXY COATING AND ADHESIVE

DESCRIPTION: 117-49 is a pad-printable, B-Stageable, thermally conductive, one part epoxy coating and adhesive. This system features excellent thermal stability. Applications include adhesives, printed circuit board fabrication, advanced material composites, sealing and high performance coatings.

PROPERTIES:

Coef. of Therm. Exp. (in/in/°C x 10 ⁻⁶)	22
Thermal Conductivity (W/mK)	0.52
Glass Transition Temp. (°C)	100
Lap Shear Strength (psi)	2200
Dielectric Strength (volts/mil)	1300
Volume Resistivity (Ω-cm)	1 x 10 ¹⁶
Dielectric Constant (100Hz)	4.0

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. As a coating, cure for one (1) hour at 125°C, or 30 minutes at 150°C. 117-49 can be thinned with small amounts of CMI# 113-39 (fast drying), or #114-20 (slow drying) thinners.

STORAGE: Shelf Life - 2 months at 25°C; or 6 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 125°C for 1-2 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 3 months @ -10°C

BONDING PROCEDURE: Refer to above for storage information. To use, carefully align parts to be bonded, apply uniform pressure to maintain location. Cure for 30 minutes at 150°C, or 1 hour at 125°C. (Note cure times given are mass related, timing should start after adhesive and substrates reach curing temperature.)

COATING: 117-49 is supplied in a consistency that is ready to use as an adhesive as described above. 117-49 can be used as a coating by dipping or spraying by further thinning it with either 113-39 (fast drying) or 114-20 (slow drying). Please refer to curing information above.

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.

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: 12/18/06 REVISION: D