

## 128-19

### SCREEN-PRINTABLE B-STAGEABLE EPOXY ADHESIVE

#### DESCRIPTION

128-19 is a screen-printable, B-stageable, one-part epoxy adhesive, suitable for application by screen-printing and syringe dispensing. 128-19 is designed to exhibit minimal flow during bonding. This product provides bonds of dissimilar materials and has excellent adhesion to copper, aluminum and ceramic and a variety of other substrates. Additional applications include, but are not limited to, assembling electronic components. This system features excellent thermal stability and flexibility in the B-Stageable form. 128-19 is an electrically insulating version of 125-22.

#### UNIQUE FEATURES

- \* Minimal flow during cure
- \* Low CTE
- \* B-Stageable
- \* Long Screen Life
- \* Excellent Chemical Resistance
- \* Excellent High Temperature Performance

#### TYPICAL UNCURED PROPERTIES

Property	Value	Units
Viscosity	100,000	cps
Specific Gravity (water = 1)	1.3	g/cc
Theoretical Coverage @ 0.001" Thickness <sup>1</sup>	~28	in <sup>2</sup>
Screen Life	> 8	hrs

<sup>1</sup> Dependent on screen mesh and material

#### TYPICAL CURED PROPERTIES

Property	Value	Units
Thermal Stability	Good to +325	° C
Useful Temperature Range	-55 to +230	° C
Glass transition Temperature – T <sub>g</sub>	150	° C
Tensile Shear Strength, min	2,000	Psi

#### CURING GUIDELINES

Temperature (°C)	Time (min.)
150	60
175	30
200	15

These temperatures and times are presented as a guide only. The end-user is encouraged to experiment to determine optimum curing schedule.

#### HANDLING AND STORAGE

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. It is important to re-suspend any settled filler before using. Be careful not to entrap air while mixing. 128-19 can be thinned with small amounts of CMI 113-12 (fast drying), or 102-03 (slow drying) thinners.

#### SHELF LIFE

Storage Temperature	Containers	B-Stageable Film
25°C	2 months	1 month
-10°C	6 months	3 months

### **B-STAGE PROCEDURE**

Apply adhesive to substrate or release liner. Next apply heat to advance the curing to the non-tacky stage when cooled to room temperature. A temperature of 100°C to 120°C for 5 to 15 minutes is required, B-Stage time is mass related. Increased B-Stage time helps reduce flow during bonding but might slightly reduce the bond strength. Too much B-Staging will cause the adhesive to have low bond strength. User is encouraged to experiment for optimum drying time at a given temperature.

### **BONDING PROCEDURE**

To use, apply b-staged adhesive to one part, carefully align parts to be bonded, apply uniform pressure to maintain location. Cure for 15 minutes at 200°C, or 30 minutes at 175°C, or 1 hour at 150°C. For better adhesion of the b-staged film to the first part, it is suggested to warm the part to 40°C. Cure times given are mass related, timing should start after adhesive and substrates reach curing temperature. Other cure time and temperatures can be used.

### **HEALTH AND SAFETY**

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.*

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