



**128-32FP**

**ANISOTROPICALLY CONDUCTIVE B-STAGEABLE EPOXY ADHESIVE**

**DESCRIPTION**

128-32FP 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 128-32FP 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. 128-32FP is especially useful in applications where shorts between closely spaced contacts is a concern and it features a finer pitch than traditional anisotropic conductive materials. This product offers a faster cure at lower temperatures and will snap cure at higher temperatures. This system features excellent thermal stability. 128-32FP is able to be used with pad sizes as small as 70 µm and spaces as fine as 30 µm.

**UNIQUE FEATURES**

- \* Minimal flow during cure
- \* B-Stageable
- \* Excellent Chemical Resistance
- \* Low Cure Temperature
- \* Long Screen Life
- \* Excellent Room Temperature Stability

**TYPICAL UNCURED PROPERTIES**

Property	Value	Units
Viscosity – Brookfield HAT Viscometer, 10 rpm @ 25°C	15,000 – 25,000	cps
Specific Gravity (water = 1)	1.13	g/cc
Theoretical Coverage @ 0.001” Thickness <sup>1</sup>	32	in <sup>2</sup>
Screen Life	> 8	hrs
Filler	Silver	-

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

**TYPICAL CURED PROPERTIES**

Property	Value	Units
Volume Resistivity (X, Y) Axis	1 x 10 <sup>16</sup>	Ω - cm
Volume Resistivity (Z) Axis	0.0001	Ω - cm
Thermal Stability	Good to +325	° C
Useful Temperature Range	-55 to +230	° C
Glass transition Temperature – Tg	105	° C
Tensile Shear Strength, min	2,000	Psi

## CURING GUIDELINES

<u>Temperature (°C)</u>	<u>Time (min.)</u>	
80	60	These temperatures and times are presented as a guide only. The end-user is encouraged to experiment to determine optimum curing schedule.
100	20	
120	3	
150	1	
175	0.5	

## 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 resuspend any settled filler before using. Be careful not to entrap air while mixing. 128-32FP can be thinned with small amounts of CMI 113-12 (fast drying), or 102-03 (slow drying) thinners.

### **SHELF LIFE**

<b>Storage Temperature</b>	<b>Containers</b>	<b>B-Staged Film</b>
25°C	≤ 3 months	≤ 1 month
-10°C	≤ 12 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 50 – 65°C for 5 to 15 minutes is required, B-Stage time is mass related. User is encouraged to experiment for optimum drying time at a given temperature. For increased surface adhesion to some substrates CMI 126-39 can be used.

## BONDING PROCEDURE

To use, apply B-staged adhesive to one part, carefully align parts to be bonded, apply uniform pressure to maintain location. Cure at one of the above cure schedules. 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.

## 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.*

REVISION DATE: 05/20/20 REVISION: A