



Creative Materials, Inc.  
12 Willow Road  
Ayer, MA 01432

T 978.391.4700  
F 978.391.4705

## 124-23

### ANISOTROPIC CONDUCTIVE THERMOPLASTIC ADHESIVE

**DESCRIPTION:** 124-23 is a thermoformable, polyester-based, anisotropic adhesive suitable for application by stamping, screen-printing, dipping and syringe dispensing. This product features excellent adhesion to Kapton, Mylar, glass and a variety of other surfaces. This product is very resistant to flexing and creasing. Applications for 124-23 include, but are not limited to, conductive splicing of ribbon cables, PTF circuits, and electrical attachment of surface mounted devices. This product is useful in application where shorts between closely spaced contacts is a concern.

#### TYPICAL CURED PROPERTIES:

|  |                    |
|--|--------------------|
| Viscosity (cps)                          | 20,000             |
| Crease Resistance                        | Excellent          |
| Volume Resistivity ( $\Omega$ -cm)       |                    |
| (X, Y Axis)                              | $1 \times 10^{12}$ |
| (Z Axis)                                 | 0.0001             |
| Hydrolytic Stability                     | Excellent          |
| Useful Temperature Range ( $^{\circ}$ C) | -55 to +120        |
| Thermal Stability ( $^{\circ}$ C)        | Good to 140        |

**SUGGESTED HANDLING & CURING:** 124-23 is ready to use as supplied. Further thinning may be accomplished by adding small amounts of CMI Thinner 102-03 and/or butyl cellosolve acetate. Prior to using, be certain to re-suspend filler. Best properties, for most applications, result when cured for several minutes at 100 $^{\circ}$ C. 124-23 can be cured at temperatures ranging from 50 $^{\circ}$ C to 150 $^{\circ}$ C. End user is advised to experimentally determine temperature and time best suited for individual applications.

**STORAGE:** Shelf Life: 6 months at 25 $^{\circ}$ C; or 9 months at 5 $^{\circ}$ C; or 12 months at -10 $^{\circ}$ C.

**SAFETY & 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: 5/15/09 REVISION: B



Creative Materials, Inc.  
12 Willow Road  
Ayer, MA 01432

T 978.391.4700  
F 978.391.4705

**PROCEDURE FOR APPLYING 124-23**

1. As with all adhesive bonds, surface preparation is a vital part of the process. Carefully clean both surfaces to be bonded with MEK if possible. If MEK is not compatible with the surfaces to be bonded, another suitable solvent may be substituted.
2. Allow cleaned surfaces to dry for approximately 2-3 minutes.
3. Apply 124-23 to one or both surfaces to be bonded by screen-printing, syringe dispensing, brushing, or spraying. The thickness range for good bonding is typically 0.6 mils to 1.3 mils for most surfaces, but is influenced by the geometry of the surfaces. The end user is encouraged to experimentally determine the best thickness for each individual application.
4. Allow 124-23 to dry at room temperature until it is tack-free to the touch. The room-temperature drying time will vary depending on the thickness of the adhesive, but usually is approximately 30-40 minutes. 111-21 can also be dried in 1-3 minutes at 120°C.
5. Place the two surfaces together and cure in a heat-sealing press for 30 to 120 seconds @ 100°C, using enough pressure (10 to 20 psi.) to hold the surfaces tightly together. Lower temperatures may be used but the lamination times will be longer and additional pressure will be required.
6. Allow to cool to room temperature under the same pressure.
7. Remove pressure. Part is ready for use.