



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

T 978.391.4700
F 978.391.4705

104-18

ELECTRICAL RESISTOR INK

DESCRIPTION: 104-18 is an electrically resistive ink, coating and adhesive suitable for screen-printing very narrow circuit lines. This product features excellent adhesion to Kapton, Mylar, glass and a variety of other substrates. Unlike conventional materials, this product is very resistant to chemicals, abrasion and scratching. Some applications for 104-18 include, but are not limited to, emi/rfi shielding of polyimide flexible circuits, polymer thick film circuitry, membrane switches, electrical attachments for surface mounted devices, and anode coatings for tantalum capacitors. 104-18 can be further cross-linked with B187 curing agent for applications requiring resistance to solvents and high humidity. Refer to handling instructions for additional information.

TYPICAL CURED PROPERTIES:

Consistency (before cure)	Smooth Paste
Filler	Carbon
Crease Resistance	Excellent
Volume Resistance (Ω -cm)	< 0.19
Sheet Resistivity (Ω /sq./mil)	< 75
Solderable	No
Solvent Resistance	Excellent
Hydrolytic Stability	Excellent
Useful Temperature Range ($^{\circ}$ C)	-55 to 200
Thermal Stability ($^{\circ}$ C)	Good to 325

SUGGESTED HANDLING & CURING: 104-18 is ready to use as supplied. Further thinning may be accomplished by adding small amounts of CMI Thinner #203 and/or butyl cellosolve acetate. Prior to using, be certain to resuspend carbon. Best properties, for most applications, result when cured for 1/2 hour at 175 $^{\circ}$ C. Good properties are obtained on a variety of substrates by curing at temperatures ranging from 50 $^{\circ}$ C to 150 $^{\circ}$ C. NOTE: Add 1phr B-187 catalyst when using low temperature cures. The use of B187 is suggested to impart a high degree of chemical resistance to the conductive lines. End user is advised to experimentally determine temperature and time best suited for individual applications.

STORAGE: Shelf life - 4 months at 25 $^{\circ}$ C; or 6 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 suitability in a particular application or possible infringements on patents.

REVISION DATE: 6/4/98 REVISION: A