



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

T 978.649.4700
F 978.649.2040

125-20

CHEMICALLY RESISTANT, MEDICAL ELECTRODE INK

DESCRIPTION

125-20 is a silver/silver chloride, one component, chemically resistant, medical electrode epoxy ink and coating suitable for application by screen-printing. This product features excellent adhesion to polyimide, polyester, polycarbonate, glass, and a variety of other substrates. Unlike conventional conductive materials, this product is very resistant to methyl ethyl ketone (MEK) and acetone as well as many other chemistries. It is also very resistant to scratching and creasing. Some applications for 125-20 include, but are not limited to, polymer thick film circuitry, trans-dermal drug delivery, ECG and EKG electrodes, defibrillator pads, tens electrodes and muscle stimulator electrodes. 125-20 is formulated to be screen-printed but can also be syringe dispensed, dipped and sprayed. The last two methods require dilution.

UNIQUE FEATURES

- * Excellent Print Definition
- * Chemically Resistant
- * High Electrical Conductivity
- * Excellent Adhesion
- * High Temperature Resistance
- * Long Screen Life

PROPERTIES

Viscosity (cps)	18,000
Filler	Silver
Percent Silver, cured	> 78
Volume Resistivity (Ω -cm)	0.0001
Sheet Resistivity (Ω /sq/mil)	0.02
Solderable	No
Hydrolytic Stability	Excellent
Useful Temperature Range ($^{\circ}$ C)	-55 to +200
Thermal Stability ($^{\circ}$ C)	Good to 325
Ag:AgCl Ratio	95 : 5
Specific Gravity (water=1)	3.04

SUGGESTED HANDLING AND CURING

125-20 is ready to use as supplied. Further thinning may be accomplished by adding small amounts of CMI Thinner # 102-03 and/or Thinner # 113-12. Prior to using, be certain to re-suspend silver. Best properties, for most applications, result when cured for 45 minutes at 165 $^{\circ}$ C or 30 minutes at 175 $^{\circ}$ C or 2 hours at 125 $^{\circ}$ C. End user is advised to experimentally determine temperature and time best suited for individual applications.

Metal screens and utensils should be avoided when working with this ink. Silver Chloride will react with some metals.

STORAGE

Shelf Life: 3 months at 25 $^{\circ}$ C; or 6 months at 5 $^{\circ}$ C or 12 months at -10 $^{\circ}$ C.
125-20 is light sensitive. Prolonged exposure to light should be avoided.

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. Refer to MSDS for additional safety precautions prior to using this product.

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: 11/03/09 REVISION: A