



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

T 978.391.4700  
F 978.391.4705

**126-40**

**FLEXIBLE SOLVENT RESISTANT ELECTRICALLY CONDUCTIVE FINE LINE EPOXY INK**

**DESCRIPTION:** 126-40 is a single component, flexible, solvent-resistant, electrically conductive ink and adhesive that has been optimized to allow for a variety of application methods including screen printing, stenciling, and dispensing circuits with fine line widths and spacing. This product features excellent adhesion to ITO coated surfaces, polyimide, polyester, glass, polycarbonate and other substrates and has virtually no bleed and minimal spreading, tailing, or stringing. This product is very resistant to methyl ethyl ketone and other aggressive solvents. It is also very resistant to flexing, scratching, and creasing. Some applications for 126-40 include, but are not limited to, touch screen bus bars, solar cell grid lines, emi/rfi shielding of polyimide flexible circuits, polymer thick film circuitry, and membrane switches.

**TYPICAL PROPERTIES:**

Property	Value	Units
Viscosity (CP-51 10/s, 25°C)	50,000 – 60,000	cps
Thixotropic Index (1/10, 25°C)	~4	-
Volume Resistivity (as low as*)	0.000025	Ω-cm
Sheet Resistivity (as low as*)	0.010	Ω/sq/mil
Specific Gravity	3.37	g/cc
Continuous operation temperature	-55 to 200	°C
Thermal Stability	Good to 200	°C
Solderable	No	-
Filler	Silver	-
% Silver (cured)	> 85	-
Hydrolytic Stability	Excellent	-
Solvent Resistance	Excellent	-

**CURE SCHEDULE AND CONDUCTIVITY:**

Cure Temperature (°C)	Cure Time	Conductivity Achievable (Ω/sq/mil)
125	30 min.	< 0.050
175	20 min.	< 0.010

**Note:** Cure times are suggestions and customers are advised to experiment for what works best in their application.

*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 particular application or possible infringements on patents.*

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**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.

**STORAGE:** Shelf life: 4 days at 25°C; 6 months at -10°C

- Upon receipt of shipment, syringes should be unpacked immediately and stored in freezer at -10° C. Do not store syringes in deep freeze (-40°C).
- Do not handle syringes from the body of the packaging. Handle from the ends of the packaging.
- Store syringes vertically (upright) with tip side down. Do not store syringes horizontally (sideways). Syringes should be stored in this manner until needed for production.
- Syringes are labeled with product number, lot number, and manufacturing date. It is important that the syringes are used according to earliest manufacturing date, "FIFO" (first in, first out).

**PREPARING SYRINGES FOR USE:**

- To thaw syringes, remove them from the freezer taking care not to handle the body of the syringe (handle from the top and/or the tip) and allow them to acclimate to ambient temperature with the tip down.
- Do not use hands to warm syringe.
- The thawing time for each syringe will vary based on fill level and a minimum of 45 minutes for 3cc, 5cc, and 10cc and a minimum of 90 minutes for 30cc syringes should be observed.
- Using a heat source to thaw syringes is not advised.
- Proximity to a heat source during thawing should be greater than 3 feet.
- Although this material can be refrozen minimizing freeze-thaw cycles is recommended.
- Once material is fully thawed remove protective wrapping.

**SYRINGE INFORMATION:**

- Creative Materials syringes have luer-lock fittings and are compatible with most types of dispensing equipment.
- Creative Materials syringe are provided packaged with smooth flow piston technology design for use on automated or manual dispense equipment but are not hand plunger equipped.
- Creative Materials routinely provides syringes in volumes of 3cc, 5cc, 10cc, and 30cc. Other sizes may be available upon request.

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