ALFA INTERNATIONAL CORPORATION
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Product Bulletin

# E10-106

Low cost, lightweight silver epoxy electrical conductor; can be used in adhesive potting, and coating applications; low volume resistivity.

## GENERAL DESCRIPTION

E10-106 represents the newest technology since the introduction of electrically conductive silver compounds. This unique formulation is based on a silver coated ceramic that results in lower material costs without adversely sacrificing the properties obtained with a pure silver formulation. This concept opens the door to a wide range of applications previously prohibited by the much higher cost of conventional silver conductives.

E10-106 cures at room temperature or can be accelerated with mild heat to form a tenacious bond between similar and dissimilar substrates such as aluminum, copper, magnesium, steel, bronze nickel, ceramic, glass, phenolic, and G-10 epoxy glass boards.

E10-106, because of its excellent continuity, has been used extensively in such diversified applications as, microwave EMI and RFI shielding, in the assembly or repair of printed circuit boards, wave guides, electronic modules, flat cable, high frequency shields, connections, circuitry and as a cold solder. This unique formulation offers ease in handling due to its creamy consistency and versatile application by hand, automatic dispenser, silk-screening, transfer or stamping techniques.

## STORAGE AND HANDLING

Since settling may occur in storage, remix each container prior to use. Refrigeration storage is recommended to minimize filler settling and to maintain viscosity and electrical conductivity. If refrigeration storage is used, to avoid condensation, allow to stabilize to room temperature before opening and removing material. OSHA Form 20 Material Safety Data Bulletins are available on request.

## SPECIFICATIONS

### HANDLING CHARACTERISTICS

Catalyst Number: Catalyst 106
Mix Ratio, Catalyst to Resin, by Weight: 1:20
Workable Pot Life, 100 g @ 25°C: 1 hr.
Mixed Viscosity @ 25°C cps: paste
Recommended Cure: 8 hrs. @ room temp.
Color: silver

### PHYSICAL CHARACTERISTICS

Shrinkage Linear, in / in: 0.004
Hardness, Shore D: 82
Specific Gravity, 25°C / 25°C: 2.60
Tensile Strength, psi: 8,900
Compressive Strength, psi: 13,700

### THERMAL CHARACTERISTICS

Thermal Conductivity, btu / hr / $ft^2$ / °F / in: 90
Thermal Expansion Coefficient,
(cm / cm / °C · $10^{-5}$): 1.9
Heat Distortion, °C: 90
Operating Temperature Range, °C: -50 to +165

### ELECTRICAL CHARACTERISTICS

Volume Resistivity, ohm · cm: < 0.0015

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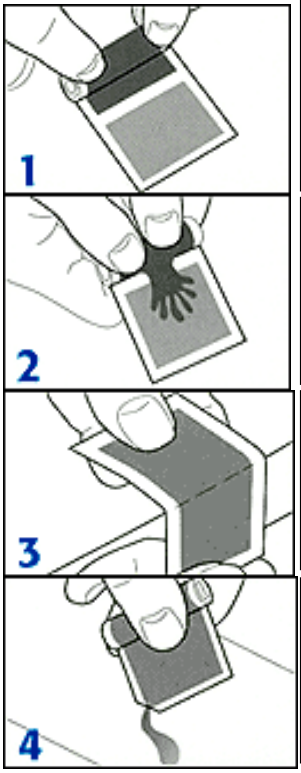
## PACKAGING

E10-106 is available in:

1- Burst Pouches (2.5 grams, 5grams, 10grams)



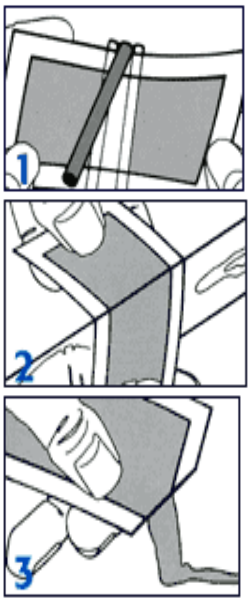

| |
|---|
| Roll pouch to force liquid toward burst seal. |
| Squeeze and apply pressure to burst through seal |
| Mix thoroughly on edge of desk until well mixed |
| Cut corner and dispense. |

2- Jars Kits: ( 0.5Lb, 1.0Lb, 2.0 Lb)

Pre-measured part A and B

PACKAGING

3- Two Chamber Pouches Seperated by Plastic Clamp (2.5 grams, 5 grams, 10 grams)

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|---|
| Hold each end of pouch and pull firmly to remove plastic divider |
| Mix thoroughly on table top or any 90˚ surface until well mixed. |
| Cut corner and dispense. Plastic divider can also be used as an applicator |