ALFA INTERNATIONAL CORPORATION
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Product Bulletin

E-1072

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

GENERAL DESCRIPTION

E-1072 is a 2 part epoxy. 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 conductive.

E-1072 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.

E-1072, 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, and 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.

SPECIFICATIONS

HANDLING CHARACTERISTICS

Catalyst Number: Part B, Catalyst E10-106LC
Mix Ratio, Part B: Part A , by Weight: 9:10
Workable Pot Life, 100 g @ 25°C: 1 hr.
Mixed Viscosity @ 25°C cps: paste
Recommended Cure: 8 hrs. @ room temp.
Color: Grey

PHYSICAL CHARACTERISTICS

Shrinkage Linear, in / in: 0.004
Hardness, Shore D: 82
Relative Density 3.5
Tensile Strength, psi: 8,900
Tensile Lap strength 4.5 max mpa
Compressive Strength, psi: 13,600

THERMAL CHARACTERISTICS

Thermal Conductivity, 2.2 w/m.k
Thermal Expansion Coefficient 45 x 10^{-6} x K^{-1}
(cm / cm / °C · 10^{-5}): 1.9
Heat Distortion, °C: 90
Operating Temperature Range, °C: -54 to +150

ELECTRICAL CHARACTERISTICS

Volume Resistivity, ohm · cm: 6 x10^{-3}

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Storage and Handling

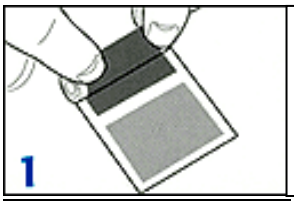
Storage Temp: 18-25 °c
Since settling may occur in storage, remix each container prior to use. Refrigeration storage is recommended to minimize filler settling and to maintain viscosity and electrical conductivity.

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.

PACKAGING

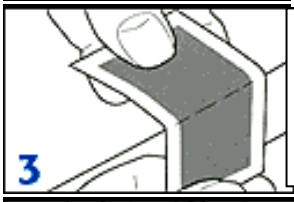
E1072 is available in:

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



Roll pouch to force liquid toward burst seal.

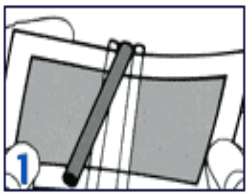
Squeeze and apply pressure to burst through seal



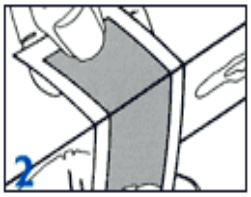
Mix thoroughly on edge of desk until well mixed

Cut corner and dispense.

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



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

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

Pre-measured part A and B