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Product Bulletin

E10-101

Pure silver filled electrically conductive epoxy. Maximum continuity of conductivity, high adhesion; can be thinned as a coating for FRI and EMI shielding.

GENERAL DESCRIPTION

E10-101 is an epoxy adhesive and coating formulation based on pure silver. This versatile silver formulation offers the maximum continuity of conductivity with an electrical resistivity value of less than $1x10^{-4}$ ohm-cm. E10-101 is also characterized by a wide operating temperature range from –50 to +170°C.

E10-101 is recommended for electronic bonding and sealing applications that require both fine electrical and mechanical properties.

E10-101 cures at room temperature or can be accelerated with mild heat to form a tenacious bond between similar and dissimilar substrates including: aluminum, copper, magnesium, steel, bronze, nickel, kovar, ceramic, glass, phenolic and G-10 epoxy glass boards.

E10-101 has been used extensively in such diversified applications as microwave EMI & 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 for high-sensitive components where hot-soldering is impractical.

This unique formulation offers ease in handling due to its creamy consistency and versatility in methods of application. This high performance conductive polymer is a smooth soft paste designed for ease in handling and use. It can be applied by hand application, automatic dispensers, silk-screening, transfer or stamping techniques.

APPLICATION

1. Clean and remove any dirt and grease from surfaces to be bonded.
2. Mix thoroughly, by weight, 5 parts E10-101 cataylst to 100 parts E10-101 silver resin.
3. Apply and cure overnight at room temperature or cure 2-3 hours at 80'C.

Cure Schedule: 24 hrs. @ Room Temp
45 mins @ 50°C
15 mins @ 100°C

SPECIFICATIONS

HANDLING CHARACTERISTICS

Catalyst Number:……. Catalyst 101
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:…….. 0.003
Hardness, Shore D: ……... 85
Specific Gravity, 25°C / 25°C: ……... 2.80
Tensile Strength, psi: …… 9,500
Compressive Strength, psi:……. 14,000

THERMAL CHARACTERISTICS

Thermal Conductivity, btu / hr / ft^2 / °F / in:… 100
Thermal Expansion Coefficient,
(cm / cm / °C · 10^{-5}): …….. 1.5
Heat Distortion, °C:…… 95
Operating Temperature Range, °C: …. -50 to +170

ELECTRICAL CHARACTERISTICS

Volume Resistivity, ohm · cm:……. < 0.0001

STORAGE AND HANDLING

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Shelf Life: At least One (1) year from the date of manufacture when stored in the original package at ambient temperature. Keep container closed when not in use. Store away from excessive heat and humidity

AVAILABILITY and PACKAGING
Available for immediate delivery From stock in:
*Highly flexible transparent two compartment plastic pouch, each section is filled with premeasured component. Pouches are supplied in 2,5,10 &20 gram sizes.
*Premeasured, one pound kit.
PRICE ON REQUEST

THIS PRODUCT IS SOLD FOR INDUSTRIAL USE ONLY, KEEP OUT OF REACH OF CHILDREN.
Read and understand all MSDS before use. Liquid uncured epoxy material may cause skin sensitization or other allergic responses. Prevent all contact with skin or eyes. If contact occurs, flush immediately with plenty of water and get immediate medical attention.