

**Product
Bulletin**

E10-104

Single Component, High Temperature Resistant, Silver-Filled , Electrically Conductive Epoxy Adhesive

GENERAL DESCRIPTION

E10-104 is a single component, heat curing, conductive epoxy polymer that was designed for ease in handling. This high performance conductive polymer cures quickly at elevated temperatures making it ideally suited for rapid processing and assembly.

E10-104 offers excellent mechanical, electrical, and physical properties at continuous operating temperatures up to 175°C. This versatile silver conductive adhesive can be used for chip bonding in micro and opto-electronic hybrid circuit fabrication. This high performance conductive polymer also exhibits outstanding adhesion to a wide variety of substrates with good hot strength at intermittent temperatures up to 325°C.

E10-104 has also been used in microwave applications for EMI and FRI shielding, for assembly and repair of circuit boards and electronic component manufacturing.

E10-104 is a smooth, soft paste that can be applied by hand application, automatic dispensers, screen-printing, transfer or stamping techniques. It is available in both a lower and higher viscosity grade for use in a variety of dispensing equipment and application 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 sheet (MSDS) is available 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.

SPECIFICATIONS
ELECTRICAL CHARACTERISTICS:

Volume Resistivity, ohm-cm:0.0001

PHYSICAL CHARACTERISTICS:

Specific gravity, gm/cc, 25° C.....2.80

Tensile shear(AL-AL)psi.....1600

Tensile strength, psi, ASTM D-638.....8950

Compressive Strength, ps.....14,500

Shrinkage, Linear, in/in.....0.003

Hardnes, Shore D.....85

Color.....Silver

HANDLING CHARACTERISTICS:

Base:.....Epoxy

Silver (Cured):.....76%

Solvent:.....None

Carbon Additives:.....None

Copper Additives:.....None

Mixed Viscosity at 25°C, cps:.....paste

CURE SCHEDULE2 hrs. @ 125°C

.....1 hr. @ 150°C

.....½ hr. @ 175°C

SHELF LIFE:4 months – Room Temp < 25°C

9 months – Refrigerated

THERMAL CHARACTERISTICS:

Thermal Conductivity, btu/hr/ft²/°F/in:..... 120

Operating Temp. Range, °C:-55 to +175 continous

Intermittent. To 325

Thermal expansion co-efficient,x10⁻⁵.....1.7

Heat distortion, °C.....120

AVAILABILITY and PACKAGING

E10-104 is available for immediate delivery From stock :

* in 2,5,10 &20 gram sizes.

* one pound kit

PRICE ON REQUEST