

TECHNICAL PRODUCT BULLETIN

GENERAL DESCRIPTION

E10-102 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.

E10-102 passes NASA's outgassing testing (ASTM E-595) and is listed in NASA's Outgassing Data for Selecting Spacecraft Materials list.

E10-102 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 electronic hybrid circuit Fabrication. This unique conductive polymer also exhibits outstanding adhesion to a wide variety of substrates with good hot strength at intermittent temperatures up to 325°C.

E10-102 has also been used in microwave applications for EMI and FRI shielding, for assembly and repair of circuit boards and Electronic component manufacturing.

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.

AVAILABILITY and PACKAGING

ALFA E10-102 is available for immediate delivery from stock in:

- Syringes: 2.5, 5, 10 and 20-gram sizes:



- Jars Kits: 0.5 Lb., 1.0 Lb., 2.0 Lb.



**Custom sizes are available upon request*

SPECIFICATIONS

HANDLING CHARACTERISTICS:

| | |
|-------------------------------|--|
| Base: | Epoxy |
| Solvent: | None |
| Carbon Additives: | None |
| Copper Additives: | None |
| Mixed Viscosity at 25°C, cps: | Soft Paste |
| Color, Filler: | Grey, Nickel |
| Cure Schedule: | 2 Hrs. at 125°C 1 Hr. at 150 °C ½ Hr. at 175°C |
| Shelf Life: | 4 months – Room Temp 9 months – Refrigerate |
| Hardness Shore-D: | 88 |

THERMAL CHARACTERISTICS

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|---|-------------|
| Thermal Conductivity, Btu/hr/ft ² /°F/in: | 10.1 |
| Operating Temp. Range, °C: | -55 to +175 |
| Intermit. To: | 325 |

ELECTRICAL CHARACTERISTICS

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|-------------------------------|------------------------|
| Volume Resistivity, ohm · cm: | < 3.8x10 ⁻² |
|-------------------------------|------------------------|

NASA OUTGASSING RESULTS

| | |
|--|------|
| TML (Total Mass Loss) %: | 0.25 |
| CVCM (Collected Volatile Condensable Materials) %: | 0.00 |
| WVR (Water Vapor Recovery) %: | 0.07 |