



Product

MCT 34-DH19/2

R3.3 HIGH TEMPERATURE ELECTRICALLY CONDUCTIVE ADHESIVE

Down-hole geothermal instrumentation must operate over a large temperature range. The technology and capabilities of room temperature to >300°C hybrid and printed-circuit (PC) board electronics had to be developed. MicroCoats conductive and non-conductive Polyimide adhesives meet that challenge.

DESCRIPTION: MCT 34-DH19/2 is an electrically conductive adhesive suitable for application by screen printing, dipping, and syringe dispensing and designed with high-temperature applications in mind. A high-temperature solution for attaching leads to ceramic substrates or too high-temperature thick film resistors

Unlike conventional conductive materials, this product features a unique high continuous operation temperature and very high glass transition temperature making it especially well-suited for extreme conditions found near a furnace, heater, and for aerospace and down-hole applications. This product features excellent adhesion to a wide range of substrates such as Kapton, Mylar, ITO sputtered surfaces, glass, Al₂O₃, AlN, Gold, and a variety of other surfaces without the addition of treatment via acid or plasma etch. This product is very resistant to flexing and creasing and is suitable for very fine lines and spaces. Some applications for MCT 34-DH19/2 include, but are not limited to, EMI/RFI shielding of polyimide flexible circuits, polymer thick film circuitry, and membrane switches.

TYPICAL CURED PROPERTIES:

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| Viscosity (cps) | 10,000 - 18,000 |
| Filler | Silver |
| Percent Silver, cured | > 90 |
| Crease Resistance | Excellent |
| Volume Resistivity* (Ω -cm) | 0.00008 |
| Sheet Resistivity* (Ω /sq/mil) | 0.03 |
| Die Shear Strength (0.06" x 0.08", Si-to-Al) | >9 Kg-f |
| T _g (°C) | 335 |
| Solderable | No - Unless plated |
| Hydrolytic Stability | Excellent |
| Useful Temperature Range (°C) | -70 to +375 |
| Thermal Stability (°C) | Good to +425 |
| Specific Gravity | 4.0 |

SUGGESTED HANDLING & CURING: MCT 34-DH19/2 is ready to use as supplied. Before using, be certain to resuspend silver. The best properties for most applications result when pre-curing for half an hour at 150°C followed by curing for 60 minutes at 250°C. Good properties are obtained on a variety of substrates by drying and curing at temperatures ranging from 180°C to 275°C. *The end-user is advised to experimentally determine the temperature and time best suited for individual applications.*

STORAGE: Shelf Life – ~30 days at 25°C; or 6 months at 5°C; or 10 months at -10°C. We recommend 3 freeze/thaw cycles max. These materials store best if stored tip down.

SAFETY & HANDLING: Use adequate ventilation. Keep away from sparks and open flames. Avoid prolonged contact with skin and breathing of vapors. Wash with soap and water to remove from skin.

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