

Product Information Sheet

MATERIAL ID:

EPO-TEK® 430

Date: 10/2006

Per:

Rev: V

Material Description:

A two component, copper-filled, electrically and thermally conductive epoxy for adhesive bonding in electronics. It may be used at the PCB level for inter-connecting, grounding and EMI RF shielding. Fast curing at relatively low temperatures may be realized.

Number of Components:

Two

Mix Ratio by weight:

100:2.5

Cure Schedule (minimum)

80°C/30 Minutes - 60°C/1 Hour

Specific Gravity:

--- Part A: 3.56 Part B: 1.02

Pot Life:

3 Hours

Shelf Life:

One year at room temperature - (viscosity will advance)

NOTE: Container(s) should be kept closed when not in use. Filled systems should be stirred thoroughly before mixing and prior to use

MATERIAL CHARACTERISTICS: *To be used as a guide only, not as a specification. Data below is not guaranteed. Different batches, conditions and applications yield differing results; Cure condition: 150°C/1 hour*
 * denotes test on lot acceptance basis

PHYSICAL PROPERTIES:			
<p>*Color (before cure): Part A: Brown Copper Part B: Amber</p> <p>*Consistency: Thick paste</p> <p>*Viscosity (23°C): @ 1.0 rpm 300,000 - 400,000 cPs</p> <p>Thixotropic Index: N/A</p> <p>*Glass Transition Temp: ≥ 110 °C (Dynamic Cure 20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)</p> <p>Coefficient of Thermal Expansion (CTE): Below Tg: 28 x 10⁻⁶ in/in°C Above Tg: 144 x 10⁻⁶ in/in°C</p> <p>Shore D Hardness: 86</p> <p>Lap Shear @ 23°C: > 2,000 psi</p> <p>Die Shear @ 23°C: ≥ 5 Kg / 1,700 psi</p> <p>Degradation Temp: 420 °C</p>	<p>Weight Loss:</p> <p>@ 200°C: 0.18 % @ 250°C: 0.27 % @ 300°C: 0.45 %</p> <p>Operating Temp:</p> <p>Continuous: - 55°C to + 250°C Intermittent: - 55°C to + 350°C</p> <p>Storage Modulus @ 23°C: 608,362 psi</p> <p>Ion Content:</p> <p>Cl⁻: 33 ppm NH₄⁺: 63 ppm Na⁺: 5 ppm K⁺: > 1 ppm</p> <p>*Particle Size: ≤ 50 microns</p>		
ELECTRICAL AND THERMAL PROPERTIES:			
<p>Thermal Conductivity: 1.34 W/mK</p> <p>*Volume Resistivity @ 23°C: ≤ 0.005 Ohm-cm</p>	<p>Dielectric Constant (1KHz): N/A</p> <p>Dissipation Factor (1KHz): N/A</p>		
OPTICAL PROPERTIES @ 23°C:			
<p>Spectral Transmission: N/A</p>	<p>Index of Refraction: N/A</p>		

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