

Date: Apr 2014
Rev: IV
No. of Components: Two
Mix Ratio by Weight: 10 : 1
Specific Gravity: Part A: 3.43 Part B: 0.94
Pot Life: 4 Hours
Shelf Life: One year at room temperature

Recommended Cure: 150°C / 1 Hour

<p>Minimum Alternative Cure(s): <i>may not achieve performance properties below</i></p> <p>150°C / 15 Minutes 100°C / 1 Hour 80°C / 3 Hours 23°C / 3 Days</p>

NOTE: Container(s) should be kept closed when not in use. Filled systems should be stirred thoroughly before mixing and prior to use. Please see Applications Note available on our website.

Product Description: EPO-TEK[®] EJ2189 is an electrically conductive, silver-filled epoxy paste. This two component system is designed for low temperature curing from ambient to 80°C, although other heat cures can be used.

Typical Properties:

*To be used as a guide only, not as a specification. Different batches, conditions & applications yield differing results.
Cure condition: varies as required * denotes test on lot acceptance basis Data below is not guaranteed.*

Post-processing / special packaging can vary the performance properties (e.g., Viscosity, Conductivity) from those stated below.

PHYSICAL PROPERTIES:

* Color (before cure):	Part A: Silver Part B: Amber
* Consistency	Smooth thixotropic paste
* Viscosity (23°C): @ 1 rpm	55,000-90,000 cPs
Thixotropic Index:	5.2
* Glass Transition Temp:	≥ 30 °C (Dynamic Cure:20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min)
Coefficient of Thermal Expansion (CTE):	
Below Tg:	53 x 10 ⁻⁶ in/in°C
Above Tg:	107 x 10 ⁻⁶ in/in°C
Shore D Hardness:	60
Lap Shear @ 23°C:	1,480 psi
Die Shear @ 23°C:	≥ 9 Kg 3,060 psi
Degradation Temp:	316 °C
Weight Loss:	
@ 200°C	0.31 %
@ 250°C	0.65 %
@ 300°C	1.93 %
OperatingTemp:	
: Continuous:	- 55°C to 160°C
Intermittent:	- 55°C to 260°C
Storage Modulus:	275,557 psi
Ion Content:	
Cl:	169 ppm
NH ₄ ⁺ :	40 ppm
NA ⁺ :	15 ppm
K ⁺ :	1 ppm
* Particle Size:	≤ 45 microns

ELECTRICAL AND THERMAL PROPERTIES:

Thermal Conductivity:	1.38 W/mK
* Volume Resistivity @ 23°C (23°C/72 Hours):	≤ 0.009 Ohm-cm
* Volume Resistivity @ 23°C (80°C/3 Hours):	≤ 0.005 Ohm-cm
* Volume Resistivity @ 23°C (150°C/1 Hour):	≤ 0.0005 Ohm-cm
Volume Resistivity @ 23°C (25°C/40-60%RH/3 Day cure):	≥ 0.007 Ohm-cm

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EPO-TEK[®] EJ2189 Advantages & Suggested Application Notes:

- Ease of use: smooth flowing paste allows for automated dispensing, stamping, brushing, or hand applications.
- Suggested applications include: EMI and Rf shielding; ITO interconnects in LCDs; low temperature cryogenic cooling.
- Exhibits superior adhesion to a wide variety of substrates including most metals, ceramics, glass and plastics.
- Hybrid/micro-electronic adhesive including die-attach and substrate attach for Rf and Microwave devices.
- Provides a metallic-like layer after cure.

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