

Date: July 2019
Rev: IX
No. of Components: Two
Mix Ratio by Weight: 10 : 1
Specific Gravity: Part A: 3.07 Part B: 0.94
Pot Life: 4 Hours
Shelf Life- Bulk: One year at room temperature
Shelf Life- Syringe: Six months at -40°C

Recommended Cure: 150°C / 1 Hour

Minimum Alternative Cure(s):

May not achieve performance properties listed below

150°C / 15 Minutes

100°C / 1 Hour

80°C / 3 Hours

23°C / 3 Days

NOTES:

- Container(s) should be kept closed when not in use.
- Filled systems should be stirred thoroughly before mixing and prior to use.
- Performance properties (rheology, conductivity, others) of the product may vary from those stated on the data sheet when bi-pak/syringe packaging or post-processing of any kind is performed. Epoxy's warranties shall not apply to any products that have been reprocessed or repackaged from Epoxy's delivered status/container into any other containers of any kind, including but not limited to syringes, bi-paks, cartridges, pouches, tubes, capsules, films or other packages.
- Syringe packaging will impact initial viscosity and effective pot life, potentially beyond stated parameters.

Product Description: EPO-TEK® EJ2189-LV is an electrically conductive, silver-filled epoxy. This two component system is designed for reliable low temperature curing.

Typical Properties: Cure condition: Varies as required Different batches, conditions & applications yield differing results.

Data below is not guaranteed. To be used as a guide only, not as a specification. * denotes test on lot acceptance basis

PHYSICAL PROPERTIES:

| | | | |
|---|--------------------------------|--|----------------------------|
| * Color (before cure): | Part A: Silver | Part B: Amber | |
| * Consistency: | Smooth flowing paste | | |
| * Viscosity (23°C) @ 1 rpm: | 25,000-45,000 | cPs | |
| Thixotropic Index: | 3.3 | | |
| * Glass Transition Temp: | ≥ 40 | °C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min) | |
| Coefficient of Thermal Expansion (CTE): | | | |
| | Below Tg: | 52 | x 10 ⁻⁶ in/in°C |
| | Above Tg: | 89 | x 10 ⁻⁶ in/in°C |
| Shore D Hardness: | 41 | | |
| Lap Shear @ 23°C: | 1,336 | psi | |
| Die Shear @ 23°C: | ≥ 10 | Kg | 3,556 psi |
| Degradation Temp: | 340 | °C | |
| Weight Loss: | | | |
| | @ 200°C: | 0.34 | % |
| | @ 250°C: | 0.80 | % |
| | @ 300°C: | 1.58 | % |
| Suggested Operating Temperature: | < 250 °C (Intermittent) | | |
| Storage Modulus: | 213,672 | psi | |
| Ion Content: | Cl ⁻ : | 201 ppm | Na ⁺ : 27 ppm |
| | NH ₄ ⁺ : | 53 ppm | K ⁺ : 2 ppm |
| * Particle Size: | ≤ 45 microns | | |

ELECTRICAL AND THERMAL PROPERTIES:

| | | |
|---|----------|--------|
| Thermal Conductivity: | 2.5 | W/mK |
| * Volume Resistivity @ 23°C (150°C/1 hour cure): | ≤ 0.0005 | Ohm-cm |
| * Volume Resistivity @ 23°C (80°C/3 hours): | ≤ 0.005 | Ohm-cm |
| * Volume Resistivity @ 23°C (25°C/40-60%RH/3 days): | ≤ 0.009 | Ohm-cm |

Epoxyes and Adhesives for Demanding Applications™

This information is based on data and tests believed to be accurate. Epoxy Technology, Inc. makes no warranties (expressed or implied) as to its accuracy and assumes no liability in connection with any use of this product.

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www.epotek.com

EPO-TEK® EJ2189-LV Advantages & Suggested Application Notes:

- Suggested application methods: dispensing, stamping, brushing, jetting, or spraying.
- Common applications: EMI and RF shielding, ITO interconnections in LCDs, cryogenic applications, SMD and die-attach.
- Adheres well to a wide variety of substrates including metals, ceramics, glass and engineering plastics.
- Low temperature die-attach used in hybrids, chip on board, and IC packages.

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