

Date: February 2023
Rev: IX
No. of Components: Two
Mix Ratio by Weight: 1 : 1
Specific Gravity: Part A: 3.82 Part B: 3.88
Pot Life: 2 Weeks **Dry Time:** < 1 Day
Shelf Life- Bulk: One year refrigerated upon arrival

Recommended Cure: 150°C/1 Hour + 200°C/1 Hour (post-cure)

Minimum Alternative Cure(s):
May not achieve performance properties listed below
 200°C / 30 Minutes

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.
- Thermal post-cure beneficial – contact techserv@epotek.com for recommendations.

Product Description: EPO-TEK® EK2000 is a two component, silver-filled adhesive that exhibits exceptional thermal and electrical conductivity along with a shiny silver appearance making it ideal for the demanding requirements of high power LED die attach applications. Other benefits include low viscosity and high thixotropy making it suitable for a wide range of application techniques. It is a two component version of EPO-TEK® EK1000.

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: Silver
* Consistency:	Smooth thixotropic paste	
* Viscosity (23°C) @ 100 rpm:	1,800 - 3,600	cPs
Thixotropic Index:	3.6	
* Glass Transition Temp:	≥ 80	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)
Coefficient of Thermal Expansion (CTE):		
Below Tg:	38	x 10 ⁻⁶ in/in°C
Above Tg:	94	x 10 ⁻⁶ in/in°C
Shore D Hardness:	66	
Lap Shear @ 23°C:	1,010	psi
Die Shear @ 23°C:	≥ 10	Kg 3,556 psi
Degradation Temp:	357	°C
Weight Loss:		
@ 200°C:	0.19	%
@ 250°C:	0.94	%
@ 300°C:	1.70	%
Suggested Operating Temperature:	< 300	°C (Intermittent)
Storage Modulus:	273,528	psi
Ion Content:	Cl ⁻ : < 10 ppm	Na ⁺ : 2 ppm
	NH ₄ ⁺ : 6 ppm	K ⁺ : 0 ppm
* Particle Size:	≤ 45	microns

ELECTRICAL AND THERMAL PROPERTIES:

Thermal Conductivity (150°C / 1 Hour):	12.6	W/mK
Thermal Conductivity (150°C / 1 Hour + 200°C / 1 Hour):	26.3	W/mK
Thermal Conductivity (125°C / 2 Hours + 150°C / 36 Minutes + 200°C / 15 Minutes):	35.5	W/mK
* Volume Resistivity @ 23°C (150°C / 1 Hour + 200°C / 1 Hour):	≤ 0.00009	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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