

**Date:** September 2017  
**Rev:** XI  
**No. of Components:** Two  
**Mix Ratio by Weight:** 10 : 1  
**Specific Gravity:** Part A: 1.12      Part B: 1.02  
**Pot Life:** 3 Hours  
**Shelf Life- Bulk:** One year at room temperature

**Recommended Cure: 150°C / 1 Hour**

Minimum Alternative Cure(s):  
*May not achieve performance properties listed below*  
 150°C / 1 Minute  
 120°C / 5 Minutes  
 100°C / 10 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.
- Syringe packaging will impact initial viscosity and effective pot life, potentially beyond stated parameters.

**Product Description:** EPO-TEK® H54 is a two component, high Tg, electrically and thermally insulating epoxy adhesive for general bonding and high temperature packaging in hybrid and optical industries.

**Typical Properties:** Cure condition: 150°C / 1 Hour      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: Tan              | Part B: Amber                                                    |
| * Consistency:                          | Smooth thixotropic paste |                                                                  |
| * Viscosity (23°C) @ 20 rpm:            | 9,000 - 15,000           | cPs                                                              |
| Thixotropic Index:                      | 3.5                      |                                                                  |
| * Glass Transition Temp:                | ≥ 90                     | °C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min) |
| Coefficient of Thermal Expansion (CTE): |                          |                                                                  |
| Below Tg:                               | 43                       | x 10 <sup>-6</sup> in/in°C                                       |
| Above Tg:                               | 231                      | x 10 <sup>-6</sup> in/in°C                                       |
| Shore D Hardness:                       | 80                       |                                                                  |
| Lap Shear @ 23°C:                       | 1,953                    | psi                                                              |
| Die Shear @ 23°C:                       | ≥ 15                     | Kg      5,334 psi                                                |
| Degradation Temp:                       | 399                      | °C                                                               |
| Weight Loss:                            |                          |                                                                  |
|                                         | @ 200°C:                 | 0.02 %                                                           |
|                                         | @ 250°C:                 | 0.45 %                                                           |
|                                         | @ 300°C:                 | 1.46 %                                                           |
| Suggested Operating Temperature:        | < 325                    | °C (Intermittent)                                                |
| Storage Modulus:                        | 559,120                  | psi                                                              |
| * Particle Size:                        | ≤ 20                     | microns                                                          |

## ELECTRICAL AND THERMAL PROPERTIES:

|                             |                               |
|-----------------------------|-------------------------------|
| Thermal Conductivity:       | N/A                           |
| Volume Resistivity @ 23°C:  | ≥ 4 x 10 <sup>12</sup> Ohm-cm |
| Dielectric Constant (1KHz): | 3.21                          |
| Dissipation Factor (1KHz):  | 0.003                         |

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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