Product Information Sheet

EPO-TEK® H74-110

Date: July 2019
Rev: V
No. of Components: Two
Mix Ratio by Weight: 10: 1
Specific Gravity: Part A: 1.20 Part B: 1.02
Pot Life: 2 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 / 1 Minute
120°C / 2 Minutes
100°C / 5 Minutes
80°C / 20 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: A two component, electrically and thermally insulating epoxy adhesive designed for semiconductor, electronics, and optical applications. It is an IR transparent version of EPO-TEK® H74 which enables fiber optic and photonic packaging. Due to its low viscosity, it is useful for sealing, potting and encapsulation projects.

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: Clear/colorless	Part B: Amber	
* Consistency:	Pourable liquid		
* Viscosity (23°C) @ 50 rpm:	3,000 - 5,000	cPs	
Thixotropic Index:	N/A		
* 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:	42	$x 10^{-6}$ in/in°C	
Above Tg:	177	$x 10^{-6}$ in/in°C	
Shore D Hardness:	85		
Lap Shear @ 23°C:	> 2,000	psi	
Die Shear @ 23°C:	≥ 15	Kg	5,334 psi
Degradation Temp:	494	°C	
Weight Loss:			
@ 200°C:	0.05	%	
@ 250°C:	0.03	%	
@ 300°C:	0.07	%	
Suggested Operating Temperature:	< 350	°C (Intermittent)	
Storage Modulus:	560,214	psi	
Ion Content:	Cl^-: 329 ppm		
	NH_4^+: 409 ppm	K^+:	5 ppm
Particle Size:	N/A		

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	N/A	
Volume Resistivity @ 23°C:	$\geq 2 \times 10^{13}$	Ohm-cm
Dielectric Constant (1KHz):	3.17	
Dissipation Factor (1KHz):	0.005	

OPTICAL PROPERTIES @ 23°C:		
Spectral Transmission:	≥ 50% @ 550	nm
	≥ 95% @ 1100-1600	nm
	≥ 98% @ 700-1000	nm
Refractive Index:	1.5694 @ 589	nm

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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