



Product Information Sheet EPO-TEK® TM121

Date: September 2017
Rev: II
No. of Components: Two
Mix Ratio by Weight: 100 : 3
Specific Gravity: Part A: 2.46 Part B: 1.02
Pot Life: 2 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 / 5 Minutes
 100°C / 20 Minutes
 80°C / 2 Hours

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, high Tg, thermally conductive and electrically insulating epoxy designed for semiconductor packaging including heat sinking, hermetic sealing, and opto-electronic assemblies.

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: Grey	Part B: Amber	
* Consistency:	Thixotropic paste		
* Viscosity (23°C) @ 5 rpm:	50,000-80,000	cPs	
Thixotropic Index:	2.5		
* 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:	21	x 10 ⁻⁶ in/in°C
	Above Tg:	110	x 10 ⁻⁶ in/in°C
Shore D Hardness:	95		
Lap Shear @ 23°C:	> 2,000	psi	
Die Shear @ 23°C:	≥ 10	Kg	3,556 psi
Degradation Temp:	419 °C		
Weight Loss:			
	@ 200°C:	0.12	%
	@ 250°C:	0.28	%
	@ 300°C:	0.52	%
Suggested Operating Temperature:	< 350 °C (Intermittent)		
Storage Modulus:	964,279	psi	
Ion Content:	Cl ⁻ :	163 ppm	Na ⁺ : 287 ppm
	NH ₄ ⁺ :	78 ppm	K ⁺ : 1 ppm
* Particle Size:	≤ 50 microns		

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	1.0	W/mK
Volume Resistivity @ 23°C:	≥ 6 x 10 ¹³	Ohm-cm
Dielectric Constant (1KHz):	5.47	
Dissipation Factor (1KHz):	0.004	

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.