

EPO-TEK® 354-Technical Data Sheet For Reference Only High Temperature Thixotropic Epoxy

Date:	February 2021	
Rev:	VII	
No. of Components:	Two	
Mix Ratio by Weight:	10 : 1	
Specific Gravity:	Part A: 1.12	Part B: 1.15
Pot Life:	3 Days	
Shelf Life- Bulk:	Six months 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 below 150°C / 10 Minutes 120°C / 30 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.

Product Description: EPO-TEK® 354-T is a two component, thixotropic, high Tg epoxy designed for semiconductor packaging in medical, fiber optic and optoelectronic assemblies. It is an electrically and thermally insulating epoxy and a more thixotropic version of EPO-TEK® 354.

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:	11,000-20,000	cPs		
Thixotropic Index:	3.3			
* Glass Transition Temp:	≥ 95	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)		
Coefficient of Thermal Expansion (CTE):				
Below Tg:	51	x 10 ⁻⁶ in/in°C		
Above Tg:	179	x 10 ⁻⁶ in/in°C		
Shore D Hardness:	85			
Lap Shear @ 23°C:	> 2,000	psi		
Die Shear @ 23°C:	≥ 10	Kg 3,556 psi		
Degradation Temp:	485	°Č		
Weight Loss:				
@ 200°C:	0.10	%		
@ 250°C:	0.23	%		
@ 300°C:	0.48	%		
Suggested Operating Temperature:	< 350	°C (Intermittent)		
Storage Modulus:	496,089	psi		
Ion Content	Cl ⁻ : 38 ppm	Na⁺: 23 ppm		
	NH4 ⁺ : 62 ppm	K*: 3 ppm		
* Particle Size:	≤ 20	microns		
ELECTRICAL AND THERMAL PROPERTIES:				
Thermal Conductivity:	Ν/Δ			
Volume Resistivity @ 23°C	$> 1 \times 10^{13}$ Ob	m-cm		

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3.46

0.008

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Dielectric Constant (1KHz):

Dissipation Factor (1KHz):

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EPO-TEK[®] 354-T Ultra Advantages & Suggested Application Notes:

- Commonly used in fiber optic, optoelectronic, and circuit assembly applications
- High strength to Metals, glass ceramic, and many types of plastic
- Often used in hybrid and lead frame based devices with High temperature compatible up to 300 C for extended periods of time
- Extended pot life of 3 days allows low waste and manufacturability over an entire shift
- Built in color change when properly cured. Users can determine cure by visual inspection when the color changes from slightly yellow to a dark amber
- Designed as a longer pot life version of 353ND-T
- Capable of being syringe dispend, screen printed or hand dispensed