

EPO-TEK® 353ND-T

Technical Data Sheet For Reference Only

High Temperature Thixotropic Epoxy

Date: September 2017

Rev: VII No. of Components: Two

Mix Ratio by Weight: 10 : 1 Specific Gravity: Part A: 1.12

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 80°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.

- Syringe packaging will impact initial viscosity and effective pot life, potentially beyond stated parameters.
- TOTAL MASS SHOULD NOT EXCEED 25 GRAMS

<u>Product Description:</u> EPO-TEK® 353ND-T is a two component, highly thixotropic epoxy with non-flowing properties and high temperature resistance.

Part B: 1.02

<u>Typical Properties:</u> 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 E	3: Amber	
* Consistency:		Smooth thixotropic pa		ste	
* Viscosity (23°C) @ 20 rpm:		9,000 -	15,000	cPs	
Thixotropic Index:			3.8		
* 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):				
Be	elow Tg:		43	x 10 ⁻⁶ in/in°C	
Ab	ove Tg:		231	x 10 ⁻⁶ 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:			409	°C	
Weight Loss:					
@	200°C:		0.53	%	
@	250°C:		1.22	%	
@	300°C:		2.37	%	
Suggested Operating Temperature:		< 325		°C (Intermittent)	
Storage Modulus:		5	59,120	psi	
Ion Content:		Cl ⁻ : 47	71 ppm	Na ⁺ : 143 ppm	
		NH ₄ +: 40	00 ppm	K ⁺ : 15 ppm	
* Particle Size:		999	% ≤ 20	microns	

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	N/A	
Volume Resistivity @ 23°C:	$\geq 4 \times 10^{12}$	Ohm-cm
Dielectric Constant (1KHz):	3.21	
Dissipation Factor (1KHz):	0.003	



EPO-TEK® 353ND-T

Technical Data Sheet
For Reference Only
High Temperature Thixotropic Epoxy

EPO-TEK® 353ND-T Advantages & Suggested Application Notes:

- Suitable for fiber optic and circuit assembly applications.
- Recommended for bonding metals, glass, ceramics and many types of plastic.
- High temperature adhesive for hybrids and medical devices; it can resist within the 300°C range for long periods of time.
- Circuit assembly applications; staking SMD's to PCB, bonding ferrite cores together in copper coil windings, inductor coils and power devices; suitable for COB glob top DAM material.
- Alternative product versions available with distinct viscosity ranges contact Technical Services at techserv@epotek.com for best recommendation.
- Can be applied by screen printing, spatula, hand held or automatic dispensing equipment.
- Amber color change when properly cured for easy visual ID and inspection.