EPO-TEK® 353ND-T

Technical Data Sheet
For Reference Only
High Temperature Thixotropic Epoxy

Date:	August 2024		
Rev:	XII		
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		
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 / 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.
- *TOTAL MASS SHOULD NOT EXCEED 25 GRAMS*

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

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:	3.8		
* 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):			
Below Tg:	43	x 10^{-6} in/in°C	
Above 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:	559,120	psi	
Ion Content:	Cl^-: 471 ppm	Na^+:	143 ppm
	NH_4^+: 400 ppm	K^+:	15 ppm
* Particle Size:	99% ≤ 20	microns	

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

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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; 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.
    - For an ISO 10993 biocompatible version, see EPO-TEK® MED-353ND-T.
- 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.

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