Manufacturer:
Epoxy Technology

Product Name:
EPO-TEK® HYB-353ND High Temperature Epoxy, Hybrid Heat & UV Cure - Pre-Mixed and Frozen (3cc Syringe)

Manufacturer Part Number:
ETHYB-353ND-3CC

Product Information Sheet

EPO-TEK® HYB-353ND PMF Syringe

Date: February 2022 **Rev:** III

Material Description: A single component, high temperature hybrid epoxy for semiconductor, fiber optic and medical applications. It is designed to have similar cured performance to EPO-TEK® 353ND; modified to allow for initial UV tacking.

Number of Components: Single

Mix Ratio by Weight: N/A

Recommended Cure: **Initial Tack 100mW/cm^2 for 20 seconds @ 240-365 nm + 150°C/30 Minutes Thermal Cure**

Minimum Alternative Cure: Initial Tack 100mW/cm^2 for 20 seconds @ 240-365 nm + 100°C/30 Minutes Thermal Cure
Initial Tack 100mW/cm^2 for 20 seconds @ 240-365 nm + 80°C/1 Hour Thermal Cure

Specific Gravity: 1.17

Pot Life: < 2 Hours

Shelf Life: Six months at -40°C

NOTES:

- To prevent gelation, keep containers away from light sources.
- 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.
- *TOTAL MASS SHOULD NOT EXCEED 25 GRAMS*

MATERIAL CHARACTERISTICS: Cure condition: Initial Tack 100mW/cm^2 for 20 seconds @ 240-365 nm + 150°C/30 Minutes
To be used as a guide only, not as a specification. Different batches, conditions and applications yield differing results.
* denotes test on lot acceptance basis Data below is not guaranteed.

PHYSICAL PROPERTIES:			
* **Color (before cure):**		Clear/Slight yellow	
* **Consistency:**		Pourable liquid	
* **Viscosity (23°C) @ 10 rpm:**		3,000 - 7,000	cPs
Thixotropic Index:		N/A	
* **Glass Transition Temp:**		≥ 100	°C (Dynamic Cure:20-200°C/ISO 25 Min; + Ramp -10-200°C @20°C/Min)
Coefficient of Thermal Expansion (CTE):			
	Below Tg:	45	x 10^{-6} in/in°C
	Above Tg:	138	x 10^{-6} in/in°C
Shore D Hardness:		78	
Die Shear @ 23°C:		≥ 20	Kg 7,112 psi
Degradation Temp:		400	°C
Weight Loss:	**@ 200°C**	0.06	**%**
	@ 250°C	0.72	**%**
	@ 300°C	2.09	**%**
Suggested Operating Temperature:		< 350	°C (Intermittent)
Storage Modulus:		542,731	psi

OPTICAL PROPERTIES @ 23°C:		
Spectral Transmission:	≥ 50% @ 550	nm
	≥ 95% @ 1,100-1,600	nm
	≥ 98% @ 800-1,000	nm
Index of Refraction:	1.5259 @ 589	nm (uncured)