



EPO-TEK® HYB-353ND-HV (formerly 113-114-1)

Date: 11/5/2015

Rev: IV

Material Description:

A two component, high temperature epoxy for semiconductor, hybrid, fiber optic and medical applications. It is designed to have similar cured performance to EPO-TEK® 353ND; modified to allow for initial UV tacking. It is a higher viscosity version of EPO-TEK® HYB-353ND.

Number of Components: Two

Mix Ratio by Weight: 100 : 5

Recommended Cure: Initial Tack 100mW/cm² for 10 seconds @ 240-365 nm + 150°C/30 Minutes Thermal Cure

Minimum Alternative Cure: Initial Tack 100mW/cm² for 10 seconds @ 240-365 nm + 100°C/30 Minutes Thermal Cure

Initial Tack 100mW/cm² for 10 seconds @ 240-365 nm + 80°C/1 Hour Thermal Cure

Specific Gravity: Part A: 1.19 Part B:1.02

Pot Life: 2 Hours

Shelf Life: Six months at room temperature, protected from light

NOTES:

- Container(s) should be kept closed when not in use.
- To prevent gelation, keep containers away from light sources.
- Filled systems should be stirred thoroughly before mixing and prior to use.
- Performance properties (rheology, conductivity & others) may vary from those stated below when syringe packaging and/or post-processing is required.
- Syringe packaging will impact initial viscosity and effective pot life, potentially beyond stated parameters.
- If product crystallizes in storage, place container in warm oven until crystallization disappears. Refer to Tech Tip #7 on website.
- **TOTAL MASS SHOULD NOT EXCEED 25 GRAMS**

MATERIAL CHARACTERISTICS: Cure Condition: Initial Tack 100mW/cm² for 10 seconds @ 240-365nm + 150°C/30 Minutes Thermal Cure
To be used as a guide only, not as a specification. Different batches, conditions and applications yield differing results.

PHYSICAL PROPERTIES:	
Color (before cure):	Part A: Clear Part B: Amber
Consistency:	Pourable liquid
Viscosity (23°C) @ 10 rpm:	11,019 cPs
Thixotropic Index:	N/A
Glass Transition Temp:	116 °C (Dynamic Cure:20-200°C/ISO 25 Min; + Ramp -10-200°C @ 20°C/Min)
Coefficient of Thermal Expansion (CTE):	
Below Tg:	48 x 10 ⁻⁶ in/in°C
Above Tg:	143 x 10 ⁻⁶ in/in°C
Shore D Hardness:	80
Die Shear @ 23°C:	28 Kg
Degradation Temp:	388 °C
Weight Loss:	
@ 200°C	< 0.05 %
@ 250°C	0.06 %
@ 300°C	1.83 %
Suggested Operating Temperature:	<300 °C (Intermittent)
Storage Modulus:	440,050 psi

OPTICAL PROPERTIES @ 23°C:	
Spectral Transmission:	≥ 50% @ 550 nm ≥ 95% @ 1,100-1,600 nm ≥ 98% @ 800-1,000 nm
Index of Refraction:	1.5556 @ 589 nm (uncured)

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