

Product Information Sheet

MATERIAL ID:
EPO-TEK® 354-T
Date: 04/2009

Per:
Rev: II

Material Description:

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. Complies with USP Class VI biocompatibility standards.

Number of Components:

Two

Mix Ratio by weight:

10:1

Cure Schedule (minimum)

150°C/10 Minutes - 120°C/30 Minutes - 80°C/2 Hours

Specific Gravity:

--- Part A: 1.12 Part B: 1.15

Pot Life:

3 Days

Shelf Life:

6 months at room temperature

NOTE: Container(s) should be kept closed when not in use. Filled systems should be stirred thoroughly before mixing and prior to use

MATERIAL CHARACTERISTICS: *To be used as a guide only, not as a specification. Data below is not guaranteed. Different batches, conditions and applications yield differing results; Cure condition: 150°C/1 hour*
 * denotes test on lot acceptance basis

PHYSICAL PROPERTIES:			
*Color (before cure):	Part A: Tan Part B: Amber	Weight Loss:	
*Consistency:	Smooth thixotropic paste	@ 200°C:	0.10 %
*Viscosity (23°C):		@ 250°C:	0.23 %
@ 20 rpm	11,000 - 20,000 cPs	@ 300°C:	0.48 %
Thixotropic Index:	3.27	Operating Temp:	
*Glass Transition Temp:	≥ 95 °C (Dynamic Cure 20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	Continuous:	- 55°C to + 250°C
Coefficient of Thermal Expansion (CTE):		Intermittent:	- 55°C to + 350°C
Below Tg:	51 x 10 ⁻⁶ in/in°C	Storage Modulus @ 23°C:	300,498 psi
Above Tg:	179 x 10 ⁻⁶ in/in°C	Ion Content:	
Shore D Hardness:	85	Cl ⁻ :	38 ppm
Lap Shear @ 23°C:	> 2,000 psi	NH ₄ ⁺ :	62 ppm
Die Shear @ 23°C:	≥ 10 Kg / 3,400 psi	Na ⁺ :	23 ppm
Degradation Temp:	485 °C	K ⁺ :	3 ppm
		*Particle Size:	≤ 20 microns

ELECTRICAL AND THERMAL PROPERTIES:			
Thermal Conductivity:	N/A	Dielectric Constant (1KHz):	3.46
Volume Resistivity @ 23°C:	≥ 1 x 10 ¹³ Ohm-cm	Dissipation Factor (1KHz):	0.008

OPTICAL PROPERTIES @ 23°C:			
Spectral Transmission:	N/A	Index of Refraction:	N/A

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