

Epoxy Technology EPO-TEK® 354 High Temperature Epoxy

Category : Polymer , Thermoset , Epoxy , Epoxy , High Temperature

Material Notes:

Product Description: EPO-TEK® 354 is a two component, high Tg epoxy designed for semiconductor packaging in medical, fiber optic and optoelectronic assemblies. It is an electrically and thermally insulating epoxy. **Advantages & Application Notes:** Extended pot-life of many days which allows low waste between manufacturing shifts. Built-in color change upon cure. Users can determine cure by visual means due to a red-amber color change from slight yellow. **Suggested Applications:** Semiconductor: capillary underfill below flip chip mounted die or SMDs. Opto-electronic: %Transmission in the IR from 800 – 2000 nm range, adhesion to Si, glass, ceramic and metals. Fiber Optic: sealing fiber into ferrules, optical connectors, adhesion to quartz, Au, kovar, stainless steel, packaging of Fiber Optic components. Medical: resisting autoclave steam sterilization cycles in fiber optic bundles, adhesion to most plastics. Designed to be a longer pot-life alternative to EPO-TEK® 353ND, it may be used in similar applications and devices. Capable of being syringe dispensed in mass production. It's medium viscosity lends itself to adhesive, sealing, potting and encapsulation. Complies with USP Class VI biocompatibility standards. Information Provided by Epoxy Technology

Order this product through the following link:

http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-354-High-Temperature-Epoxy.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.15 g/cc	1.15 g/cc	Part B
	1.20 g/cc	1.20 g/cc	Part A
Viscosity	4000 - 6000 cP	4000 - 6000 cP	50 rpm
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	82	82	
Tensile Modulus	2.46 GPa	356 ksi	Storage
Shear Strength	11.50 MPa	1668 psi	Lap
	>= 23.4 MPa	>= 3400 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	96.0 µm/m-°C	53.3 µin/in-°F	Below Tg
	175 µm/m-°C	97.2 µin/in-°F	Above Tg
Maximum Service Temperature, Air	250 °C	482 °F	Continuous
	350 °C	662 °F	Intermittent
Minimum Service Temperature, Air	-55.0 °C	-67.0 °F	Continuous

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	>= 95.0 °C	>= 203 °F	Dynamic Cure 20–200°C /ISO 25 Min; Ramp 10–200°C @ 20°C/Min
Decomposition Temperature	487 °C	909 °F	Degradation Temperature

Optical Properties	Metric	English	Comments
Refractive Index	1.5734	1.5734	uncured
	@Wavelength 589 nm	@Wavelength 589 nm	
Transmission, Visible	>= 96 %	>= 96 %	Spectral
	@Wavelength 600 nm	@Wavelength 600 nm	
	>= 99 %	>= 99 %	Spectral
	@Wavelength 800 nm	@Wavelength 800 nm	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 2.00e+13 ohm-cm	>= 2.00e+13 ohm-cm	
Dielectric Constant	3.48	3.48	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dissipation Factor	0.0040	0.0040	
	@Frequency 1000 Hz	@Frequency 1000 Hz	

Chemical Properties	Metric	English	Comments
Ionic Impurities - Na (Sodium)	17 ppm	17 ppm	
Ionic Impurities - K (Potassium)	9.0 ppm	9.0 ppm	
Ionic Impurities - Cl (Chloride)	81 ppm	81 ppm	

Processing Properties	Metric	English	Comments
Cure Time	10.0 min	0.167 hour	Minimum Bond Line
	@Temperature 150 °C	@Temperature 302 °F	
	30.0 min	0.500 hour	Minimum Bond Line
	@Temperature 120 °C	@Temperature 248 °F	
Pot Life	180 min	180 min	
Shelf Life	12.0 Month	12.0 Month	

Processing Properties	@Temperature 25.0 °C Metric	@Temperature 77.0 °F English	Comments
Descriptive Properties	Value		Comments
Color	Clear/Colorless		Part A
	Dark Amber		Part B
Consistency	Pourable liquid		
Ionic Impurities NH4	300 ppm		
Mix Ratio By Weight	10:1		
Number of Components	Two		
Weight Loss	0.5%		200°C
	0.7%		250°C
	0.85%		300°C

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China