

Epoxy Technology EPO-TEK® EK2000 Epoxy

Category : Polymer , Thermoset , Epoxy

Material Notes:

Preliminary Product Information SheetMaterial Description: A two component, silver-filled adhesive that exhibits exceptional thermal and electrical conductivity along with a shiny silver appearance making it ideal for the demanding requirements of high power LED die attach applications. Other benefits include low viscosity and high thixotropy making it suitable for a wide range of application techniques. It is a two component version of EPO-TEK® EK1000.Information Provided by Epoxy Technology

Order this product through the following link:

http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-EK2000-Epoxy.php

Physical Properties	Metric	English	Comments
Specific Gravity	3.82 g/cc	3.82 g/cc	Part A
	3.88 g/cc	3.88 g/cc	Part B
Particle Size	<= 45 µm	<= 45 µm	
Viscosity	1686 cP	1686 cP	100 rpm
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	66	66	
Tensile Modulus	1.89 GPa	274 ksi	Storage
Shear Strength	6.96 MPa	1010 psi	Lap
	>= 11.7 MPa	>= 1700 psi	Die after 1000 hrs 85C/85%R
	>= 23.4 MPa	>= 3400 psi	Die Initial

Thermal Properties	Metric	English	Comments
CTE, linear	38.0 µm/m-°C	21.1 µin/in-°F	Below Tg
	94.0 µm/m-°C	52.2 µin/in-°F	Above Tg
Thermal Conductivity	12.6 W/m-K	87.4 BTU-in/hr-ft²-°F	
	@Temperature 150 °C, Time 3600 sec	@Temperature 302 °F, Time 1.00 hour	
	26.3 W/m-K	183 BTU-in/hr-ft²-°F	+200°C/1 hr
	@Temperature 150 °C, Time 3600 sec	@Temperature 302 °F, Time 1.00 hour	
Maximum Service Temperature, Air	200 °C	392 °F	Continuous

Thermal Properties	Metric 300 °C	English 572 °F	Comments Intermittent
Minimum Service Temperature, Air	-55.0 °C	-67.0 °F	Continuous
	-55.0 °C	-67.0 °F	Intermittent
Glass Transition Temp, Tg	>= 104 °C	>= 219 °F	
Decomposition Temperature	357 °C	675 °F	Degradation Temperature

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 0.000090 ohm-cm	<= 0.000090 ohm-cm	

Chemical Properties	Metric	English	Comments
Ionic Impurities - Na (Sodium)	2.0 ppm	2.0 ppm	
Ionic Impurities - K (Potassium)	0.00 ppm	0.00 ppm	
Ionic Impurities - Cl (Chloride)	<= 10 ppm	<= 10 ppm	

Processing Properties	Metric	English	Comments
Cure Time	30.0 min @Temperature 200 °C	0.500 hour @Temperature 392 °F	minimum
Pot Life	20160 min	20160 min	
Shelf Life	12.0 Month	12.0 Month	refrigerated upon arrival

Descriptive Properties	Value	Comments
Color	Silver	Part A
	Silver	Part B
Consistency	Smooth thixotropic paste	
Ionic Impurities NH4	6 ppm	
Mix Ratio By Weight	1:1	
Number of Components	Two	
Thixotropic Index	3.6	
Weight Loss	0.19%	200°C
	0.94%	250°C

Descriptive Properties	1.7% Value	200°C Comments
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