

Epoxy Technology EPO-TEK® H20E-8 Electrically Conductive, Silver Epoxy

Category : Polymer , Thermoset , Epoxy , Epoxy, Electrically Conductive

Material Notes:

Product Description: EPO-TEK® H20E-8 is a two component, silver-filled epoxy system designed specifically for chip bonding in microelectronic and optoelectronic applications. It is a higher viscosity and higher thixotropic version of EPO-TEK® H20E. Advantages & Application Notes: Especially recommended for use in high speed epoxy chip bonding systems where very fast cures are desired. Suggested for JEDEC Level III and II for plastic IC packaging. Capable of resisting TC wire bonding temperatures in the 300°C range. Ease of use: apply by dispensing, screen printing, or by hand. Especially suited for high power devices and high current flow. High power LEDs. Opto-electronic packaging material: LED, LCDs, and fiber optic components. Information Provided by Epoxy Technology

Order this product through the following link:

http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-H20E-8-Electrically-Conductive-Silver-Epoxy.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.72 g/cc	2.72 g/cc	Part A
	4.33 g/cc	4.33 g/cc	Part B
Particle Size	<= 45 µm	<= 45 µm	
Viscosity	10000 - 20000 cP	10000 - 20000 cP	20 rpm
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	66	66	
Tensile Modulus	5.46 GPa	791 ksi	Storage
Shear Strength	8.384 MPa	1216 psi	Lap
	>= 11.7 MPa	>= 1700 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	26.0 µm/m-°C	14.4 µin/in-°F	Below Tg
	111 µm/m-°C	61.7 µin/in-°F	Above Tg
Thermal Conductivity	3.50 W/m-K	24.3 BTU-in/hr-ft²-°F	
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
	-55.0 °C	-67.0 °F	Intermittent

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	≥ 88.0 °C	≥ 176 °F	Dynamic Cure 20–200°C /ISO 25 Min; Ramp -10–200°C @ 20°C/Min
Decomposition Temperature	470 °C	878 °F	Degradation Temperature

Electrical Properties	Metric	English	Comments
Volume Resistivity	≤ 0.00040 ohm-cm	≤ 0.00040 ohm-cm	

Chemical Properties	Metric	English	Comments
Ionic Impurities - Cl (Chloride)	141 ppm	141 ppm	

Processing Properties	Metric	English	Comments
Cure Time	5.00 min	0.0833 hour	Minimum Bond Line
	@Temperature 150 °C	@Temperature 302 °F	
	15.0 min	0.250 hour	Minimum Bond Line
	@Temperature 120 °C	@Temperature 248 °F	
	90.0 min	1.50 hour	Minimum Bond Line
	@Temperature 80.0 °C	@Temperature 176 °F	
Pot Life	4320 min	4320 min	
Shelf Life	12.0 Month	12.0 Month	
	@Temperature 25.0 °C	@Temperature 77.0 °F	

Descriptive Properties	Value	Comments
Color	Silver	Part A
	Silver	Part B
Consistency	Thixotropic paste	
Ionic Impurities NH4	265 ppm	
Mix Ratio By Weight	1:1	
Number of Components	Two	
Thixotropic Index	4.85	
Weight Loss	0.25%	200°C
	0.37%	250°C

Descriptive Properties	0.79% Value	300°C Comments
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