Epoxy Technology EPO-TEK® H20-HC Electrically Conductive Epoxy

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

Material Notes:

Product Description: EPO-TEK® H20E-HC is a two component, 100% solids silver-filled epoxy system designed specifically for chip bonding in microelectronic and optoelectronic applications. It is also used extensively for thermal management applications due to its high thermal conductivity. Also available in a single component frozen syringe. This is an increased thermal conductivity version of EPOTEK® H20E.Advantages & Application Notes: Processing info - it can be applied by many dispensing, stamping and screen printing techniques.Dispensing: compatible with pressure/time delivery, auger screws, fluid jetting and G27 needles, in a singlecomponent fashion.Screen Printing: best using >200 metal mesh with polymer squeegee blade with 80D hardness.Stamping: small dots 6 mil in diameter can be realized.Misc /Other notes:Versatility in curing techniques including box oven, SMT style tunnel oven, heater gun, hot plate, IR, convection, or inductor coil.Suggested applications:LED – HB LED industry; light engines for HD-TV; LCD color projection.Solar, dieattach epoxy for CPV chips onto ceramic carriers; thermal epoxy for ceramic to aL finned heat sink.Information Provided by Epoxy Technology

Order this product through the following link: http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-H20-HC-Electrically-Conductive-Epoxy.php

Physical Properties	Metric	English	Comments
Specific Gravity	3.44 g/cc	3.44 g/cc	Part A
	4.39 g/cc	4.39 g/cc	Part B
Particle Size	<= 45 μm	<= 45 μm	
Viccosity	3500 - 6000 cP	3500 - 6000 cP	50 mm
viscosity	@Temperature 23.0 °C @Temperature 73.4 °F	50 ipin	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	93	93	
Tensile Modulus	3.9490 GPa	572.75 ksi	Storage
Shear Strength	11.7 MPa	1700 psi	Lap

Thermal Properties	Metric	English	Comments
CTE, linear	53.0 μm/m-°C	29.4 µin/in-°F	Below Tg
	80.0 μm/m-°C	44.4 μin/in-°F	Above Tg
	10.9 W/m-K	75.6 BTU-in/hr-ft²-°F	
Thermal Conductivity	@Temperature 150 °C, Time 3600 sec	@Temperature 302 °F, Time 1.00 hour	
	23.0 W/m-K	160 BTU-in/hr-ft²-°F	

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Thermal Properties	Metric Metric Derature 150 °C,	Englisherature 302 °F,	Comments
	Time 3600 sec	Time 1.00 hour	
Maximum Service Temperature, Air	175 °C	347 °F	Continuous
	275 °C	527 °F	Intermittent
Minimum Service Temperature, Air	-55.0 °C	-67.0 °F	Continuous
	-55.0 °C	-67.0 °F	Intermittent
Decomposition Temperature	372 °C	702 °F	Degradation Temperature

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 0.000080 ohm-cm	<= 0.000080 ohm-cm	

Chemical Properties	Metric	English	Comments
Ionic Impurities - Na (Sodium)	24 ppm	24 ppm	
Ionic Impurities - K (Potassium)	>= 17 ppm	>= 17 ppm	
Ionic Impurities - Cl (Chloride)	34 ppm	34 ppm	

Processing Properties	Metric	English	Comments
Cure Time	30.0 min	0.500 hour	Minimum Bond Line
Cure Time	@Temperature 175 °C	@Temperature 347 °F	
Pot Life	3600 min	3600 min	
	12.0 Month	12.0 Month	
Sheit Lite	@Temperature 25.0 °C	@Temperature 77.0 °F	

Descriptive Properties	Value	Comments
Color	Silver	Part A
	Silver	Part B
Consistency	Smooth thixotropic paste	
Ionic Impurities NH4	45 ppm	
Mix Ratio By Weight	1:1	
Number of Components	Тwo	
Thixotropic Index	3.48	



Weight Lass Descriptive Properties	0 14% Value	200°C Comments
	0.42%	250°C
	1.05%	300°C

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