Epoxy Technology EPO-TEK® H35-175MPLV Electrically Conductive, Silver Epoxy

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

Material Notes:

Product Description: EPO-TEK® H35-175MPLV is a single component, silver-filled, electrically conductive epoxy designed for semiconductor die attach applications found in hybrids, JEDEC, and opto-electronic packaging. It is a lower viscosity version of EPO-TEK® H35-175MPAdvantages & Application Notes:Performs exceptionally well as a die attach for small chips such as GaAs, LEDs and diodes.Capable of resisting 260°C green reflow process, low outgassing in hermetic lid-seal processes near 300°C, and organic burn-in up to 150°C/1000 hours storage.Certified to MIL-STD 883/Test Method 5011.Capable of JEDEC Level II die-attach packaging on die-paddles and lead-frames.Widely used epoxy; popular choice for silver-filled epoxies; opto-packaging, hybrids, and many types of substrates including kovar, ceramic and BT.Available in many different viscosity rangesDesigned for improved flow for smaller needle gauge dispensing, or stamping operationsInformation Provided by Epoxy Technology

Order this product through the following link:
http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-H35-175MPLV-Electrically-Conductive-Silver-Epoxy.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.65 g/cc	2.65 g/cc	
Particle Size	<= 20 µm	<= 20 µm	
Viscosity	10500 - 16500 cP @Temperature 23.0 °C	10500 - 16500 cP @Temperature 73.4 °F	10 rpm

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	75	75	
Tensile Modulus	3.41 GPa	495 ksi	Storage
Shear Strength	12.85 MPa	1864 psi	Lap
	>= 23.4 MPa	>= 3400 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	47.0 µm/m-°C	26.1 µin/in-°F	Below Tg
	190 µm/m-°C	106 µin/in-°F	Above Tg
Thermal Conductivity	1.50 W/m-K	10.4 BTU-in/hr-ft²-°F	
Maximum Service Temperature, Air	180 °C	356 °F	Continuous
	280 °C	536 °F	Intermittent

Thermal Properties	Metric	English	Comments
Minimum Service Temperature, Air	-55.0 °C	-67.0 °F	Continuous
	-55.0 °C	-67.0 °F	Intermittent
Glass Transition Temp, Tg	>= 100 °C	>= 212 °F	Dynamic Cure 20—300°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min
Decomposition Temperature	330 °C	626 °F	Degradation Temperature

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 0.00050 ohm-cm	<= 0.00050 ohm-cm	

Chemical Properties	Metric	English	Comments
Ionic Impurities - Na (Sodium)	<= 50 ppm	<= 50 ppm	
Ionic Impurities - K (Potassium)	<= 50 ppm	<= 50 ppm	
Ionic Impurities - Cl (Chloride)	<= 200 ppm	<= 200 ppm	

Processing Properties	Metric	English	Comments
Cure Time	60.0 min @Temperature 180 °C	1.00 hour @Temperature 356 °F	Minimum Bond Line
	90.0 min @Temperature 165 °C	1.50 hour @Temperature 329 °F	Minimum Bond Line
Pot Life	40320 min	40320 min	
Shelf Life	12.0 Month @Temperature -40.0 °C	12.0 Month @Temperature -40.0 °F	

Descriptive Properties	Value	Comments
Color	Silver	
Consistency	Smooth paste	
Ionic Impurities NH4	32 ppm	
Number of Components	Single	
Thixotropic Index	2.66	
Weight Loss	0.04%	200°C
	0.06%	250°C
	0.19%	300°C

Descriptive Properties	Value	Comments

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