

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

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

Material Notes:

Product Description: EPO-TEK® H35MPT is a single component, silver-filled, electrically conductive epoxy designed for military hybrid die and component attach. High viscosity version of EPO-TEK® H35-175MP

Advantages & 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 –yields low levels of water extractable monovalent ions such as Chlorides. 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. Information Provided by Epoxy Technology

Order this product through the following link:

http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-H35-175MPT-Electrically-Conductive-Silver-Epoxy.php

Physical Properties	Metric	English	Comments
Specific Gravity	3.65 g/cc	3.65 g/cc	
Particle Size	<= 20 µm	<= 20 µm	
Viscosity	90000 - 110000 cP @Temperature 23.0 °C	90000 - 110000 cP @Temperature 73.4 °F	2.5 rpm

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	83	83	
Tensile Modulus	2.92 GPa	424 ksi	Storage
Shear Strength	11.67 MPa	1693 psi	Lap
	>= 23.4 MPa	>= 3400 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	35.0 µm/m-°C	19.4 µin/in-°F	Below Tg
	123 µm/m-°C	68.3 µin/in-°F	Above Tg
Thermal Conductivity	2.67 W/m-K	18.5 BTU-in/hr-ft²-°F	
Maximum Service Temperature, Air	200 °C	392 °F	Continuous
	300 °C	572 °F	Intermittent
Minimum Service Temperature, Air	-55.0 °C	-67.0 °F	Continuous

Thermal Properties	-55.0 °C Metric	-67.0 °F English	Intermittent Comments
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	354 °C	669 °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	1.00 hour	Minimum Bond Line
	@Temperature 180 °C	@Temperature 356 °F	
	90.0 min	1.50 hour	Minimum Bond Line
	@Temperature 165 °C	@Temperature 329 °F	
Pot Life	40320 min	40320 min	
Shelf Life	12.0 Month	12.0 Month	
	@Temperature -40.0 °C	@Temperature -40.0 °F	

Descriptive Properties	Value	Comments
Color	Silver	
Consistency	Smooth thixotropic paste	
Ionic Impurities NH4	32 ppm	
Number of Components	Single	
Thixotropic Index	4.6	
Weight Loss	0.03%	200°C
	0.05%	250°C
	0.13%	300°C

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