

Epoxy Technology EPO-TEK® EM127 Electrically Conductive Epoxy

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

Material Notes:

Product Description: EPO-TEK® EM127 is a single component, heat curable, electrically conductive epoxy adhesive for semiconductor IC and LED die attach applications. **Advantages & Application Notes:** Shiny silver appearance after cure is cosmetically desired in the LED industry. One component chemistry provides ease of use and long pot life. Low viscosity and high thixotropy ideal for high speed dotting and stamping processes. High strength after MSL 1 moisture test. Moderate Tg provides a robust and strong chemistry for small sized LEDs < 13 mil x 13 mil. **Suggested Applications:** Semiconductor: die attach onto lead-frames. Electronics: Electrically conductive adhesive ("ECA") for PCB and level 3&4 connections to SMDs, discrete components and connectors. Automotive proven ECA and COB die-attach epoxy. Optics: LED die attach, ECA for LED and fiber optic industry. Information Provided by Epoxy Technology

Order this product through the following link:

http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-EM127-Electrically-Conductive-Epoxy.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.74 g/cc	2.74 g/cc	
Particle Size	<= 20 µm	<= 20 µm	
Viscosity	2500 - 3300 cP @Temperature 23.0 °C	2500 - 3300 cP @Temperature 73.4 °F	100 rpm

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	85	85	
Tensile Modulus	4.67 GPa	677 ksi	Storage
Shear Strength	>= 23.4 MPa	>= 3400 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	28.0 µm/m-°C	15.6 µin/in-°F	Below Tg
	117 µm/m-°C	65.0 µin/in-°F	Above Tg
Thermal Conductivity	1.20 W/m-K	8.33 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
	-55.0 °C	-67.0 °F	Intermittent
Glass Transition Temp, Tg	>= 65.0 °C	>= 149 °F	Dynamic Cure 20–200°C /ISO 25 Min;

Thermal Properties	Metric	English	Ramp - 10-200 °C @ 20 °C/Min Comments
Decomposition Temperature	380 °C	716 °F	Degradation Temperature

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 0.00090 ohm-cm	<= 0.00090 ohm-cm	

Processing Properties	Metric	English	Comments
Cure Time	30.0 min @Temperature 160 °C	0.500 hour @Temperature 320 °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 thixotropic paste	
Number of Components	Single	
Thixotropic Index	5.5	
Weight Loss	0.22%	200°C
	0.65%	300°C

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