

## Epoxy Technology EPO-TEK® P1011 Electrically Conductive Modified Polyimide

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

### Material Notes:

**Product Description:** EPO-TEK® P-1011 is a single component, modified polyimide, silver-filled adhesive designed for chip bonding in microelectronic and optoelectronic applications. **Advantages & Application Notes:** Low stress die-attach adhesive that is very effective for bonding quartz crystal oscillators used in Rf / Microwave wireless devices. Designed specifically for screen printing and machine dispensing applications. A lower viscosity version, called P1011S is available for die-stamping processes. Recommended for screen printing applications; long dry time. Good electrical and thermal conductivity. Suggested for ceramic and DIP packaging of hybrids, as well as TO-Cans. Information Provided by Epoxy Technology

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Epoxy-Technology-EPO-TEK-P1011-Electrically-Conductive-Modified-Polyimide.php](http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-P1011-Electrically-Conductive-Modified-Polyimide.php)

Physical Properties	Metric	English	Comments
Specific Gravity	2.39 g/cc	2.39 g/cc	
Particle Size	<= 20 µm	<= 20 µm	
Viscosity	8000 - 12000 cP @Temperature 23.0 °C	8000 - 12000 cP @Temperature 73.4 °F	20 rpm

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	61	61	
Shear Strength	>= 11.7 MPa	>= 1700 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	32.0 µm/m-°C	17.8 µin/in-°F	Below Tg
	225 µm/m-°C	125 µin/in-°F	Above Tg
Thermal Conductivity	>= 2.74 W/m-K	>= 19.0 BTU-in/hr-ft <sup>2</sup> -°F	
Maximum Service Temperature, Air	225 °C	437 °F	Continuous
	325 °C	617 °F	Intermittent
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	Ramp 40°C/Min to 300°C

Decomposition Temperature Thermal Properties	389 °C Metric	732 °F English	Degradation Temperature Comments
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Electrical Properties	Metric	English	Comments
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Volume Resistivity	<= 0.00050 ohm-cm	<= 0.00050 ohm-cm	
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Chemical Properties	Metric	English	Comments
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Ionic Impurities - Na (Sodium)	39 ppm	39 ppm	
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Ionic Impurities - K (Potassium)	18 ppm	18 ppm	
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Ionic Impurities - Cl (Chloride)	114 ppm	114 ppm	
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Processing Properties	Metric	English	Comments
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Dry Time	<= 168 hour	<= 168 hour	
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Cure Time	30.0 min	0.500 hour	Pre-Bake, Minimum Bond Line
	@Temperature 80.0 °C	@Temperature 176 °F	

	90.0 min	1.50 hour	Post-Cure, Minimum Bond Line
	@Temperature 285 °C	@Temperature 545 °F	

Shelf Life	12.0 Month	12.0 Month	
	@Temperature 25.0 °C	@Temperature 77.0 °F	

Descriptive Properties	Value	Comments
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Color	Silver	
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Consistency	Smooth slightly thixotropic paste	
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Ionic Impurities NH4	27 ppm	
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Number of Components	Single	
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Thixotropic Index	1.9	
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Weight Loss	0.06%	200°C
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	0.08%	250°C
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	0.15%	300°C
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## Contact Songhan Plastic Technology Co.,Ltd.

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