EPOXY TECHNOLOGY

EPO-TEK® P1011

Technical Data Sheet

For Reference Only

Electrically Conductive Modified Polyimide

Number of Components:	Single	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	N/A	Pre-Bake	30 Min @ 80°C (max)
		Cure	1 Hour @ 150°C
Specific Gravity:	2.39		(with or without vacuum)
Part A		Post-Cure	90 Min @ 285°C
Part B			
Pot Life: N/A Dry Time:	7 Days		
Shelf Life:	One year at room temperature		

Note: Container(s) should be kept closed when not in use. For filled systems, mix contents of container thoroughly.
**Please see Applications Note available on our website.*

Product Description:
EPO-TEK® P-1011 is a single component, modified polyimide, silver-filled adhesive designed for chip bonding in microelectronic and optoelectronic applications.

EPO-TEK® P-1011 Advantages & Applications 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.

Typical Properties: *(To be used as a guide only, not as a specification. Data below is not guaranteed. Different batches, conditions and applications yield differing results; Cure condition: varies as required; * denotes test on lot acceptance basis)*

***Color:** Silver	**Weight Loss:**
***Consistency:** Smooth slightly thixotropic paste	**@ 200°C:** 0.06%
***Viscosity (@ 20 RPM/23°C):** 8,000 - 12,000 cPs	**@ 250°C:** 0.08%
Thixotropic Index: 1.9	**@ 300°C:** 0.15%
***Glass Transition Temp.(Tg):** ≥ 100°C	**Operating Temp:**
(Ramp 40°C/Min to 300°C)	**Continuous:** - 55°C to +225°C
Coefficient of Thermal Expansion (CTE):	**Intermittent:** - 55°C to +325°C
Below Tg: 32×10^{-6} in/in/°C	**Storage Modulus @ 23°C:** Upon Request
Above Tg: 225×10^{-6} in/in/°C	**Ions:** Cl^- 114 ppm
Shore D Hardness: 61	Na^+ 39 ppm
Lap Shear Strength @ 23°C: N/A	NH_4^+ 27 ppm
Die Shear Strength @ 23°C: ≥ 5 Kg / 1,700 psi	K^+ 18 ppm
Degradation Temp. (TGA): 389°C	***Particle Size:** ≤ 20 Microns
Electrical Properties:	
***Volume Resistivity @ 23°C:** ≤ 0.0005 Ohm-cm	
Thermal Properties:	
Thermal Conductivity: > 2.74 W/mK	

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