

Number of Components:	Single	Minimum Bond Line Cure Schedule*:
Mix Ratio By Weight:	N/A	Pre-Bake 30 Min @ 80°C (max)
Specific Gravity:	2.39	Cure 1 Hour @ 150°C
Part A		(with or without vacuum)
Part B		Post-Cure 90 Min @ 285°C
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)

<p>*Color: Silver</p> <p>*Consistency: Smooth slightly thixotropic paste</p> <p>*Viscosity (@ 20 RPM/23°C): 8,000 - 12,000 cPs</p> <p>Thixotropic Index: 1.9</p> <p>*Glass Transition Temp.(Tg): ≥ 100°C (Ramp 40°C/Min to 300°C)</p> <p>Coefficient of Thermal Expansion (CTE): Below Tg: 32 x 10⁻⁶ in/in/°C Above Tg: 225 x 10⁻⁶ in/in/°C</p> <p>Shore D Hardness: 61</p> <p>Lap Shear Strength @ 23°C: N/A</p> <p>Die Shear Strength @ 23°C: ≥ 5 Kg / 1,700 psi</p> <p>Degradation Temp. (TGA): 389°C</p>	<p>Weight Loss:</p> <p>@ 200°C: 0.06%</p> <p>@ 250°C: 0.08%</p> <p>@ 300°C: 0.15%</p> <p>Operating Temp:</p> <p>Continuous: - 55°C to +225°C</p> <p>Intermittent: - 55°C to +325°C</p> <p>Storage Modulus @ 23°C: Upon Request</p> <p>Ions: Cl⁻ 114 ppm Na⁺ 39 ppm NH₄⁺ 27 ppm K⁺ 18 ppm</p> <p>*Particle Size: ≤ 20 Microns</p>
Electrical Properties:	
*Volume Resistivity @ 23°C: ≤ 0.0005 Ohm-cm	
Thermal Properties:	
Thermal Conductivity: > 2.74 W/mK	

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