Product Information Sheet

MATERIAL ID: **EPO-TEK® P1011-ST** ***(formerly 52-190)***
Date: 03/2009 **Per:** MJH
Rev: II

Material Description: A single component, modified polyimide, high-temperature grade, silver-filled, electrically and thermally conductive adhesive designed for semiconductor die-attach and hybrid microelectronic packaging. It is a lower viscosity version of EPO-TEK® P1011-T.

Number of Components: Single
Mix Ratio by weight: N/A
Cure Schedule (minimum) Pre-Bake: 80°C/30 Minutes (maximum) - Cure: 150°C/1 Hour (with or without vacuum) - Post Cure: 285°C/90 Minutes;
Specific Gravity: 2.71 --- Part A: Part B:
Pot Life: N/A **Dry Time:** 28 Days
Shelf Life: Six months at room temperature

NOTE: Container(s) should be kept closed when not in use. Filled systems should be stirred thoroughly before mixing and prior to use.

MATERIAL CHARACTERISTICS: *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: Pre-Bake: 80°C/30 Minutes (maximum) - Cure: 150°C/1 Hour (with or without vacuum) - Post Cure: 285°C/90 Minutes;
* denotes test on lot acceptance basis

PHYSICAL PROPERTIES:			
***Color (before cure):**	Silver		
***Consistency:**	Smooth paste	**Die Shear @ 23°C:**	< 5 **Kg**
***Viscosity (23°C):**		**Degradation Temp:**	362 **°C**
@ 10 **rpm**	16,000 - 25,000 **cPs**	**Weight Loss:**	
Thixotropic Index:	2.1	**@ 200°C:**	< 0.05 **%**
***Glass Transition Temp:**	≥ 100 **°C**	**@ 250°C:**	0.10 **%**
(Ramp 40°C/Min to 300°C)		**@ 300°C:**	0.41 **%**
Coefficient of Thermal Expansion (CTE):		**Operating Temp:**	
Below Tg:	Upon Request	**Continuous:**	- 55**°C to** + 200**°C**
Above Tg:	Upon Request	**Intermittent:**	- 55**°C to** + 300**°C**
Shore D Hardness:	Upon Request	**Storage Modulus @ 23°C:**	Upon Request
Lap Shear @ 23°C:	N/A	***Particle Size:**	≤ 20 **microns**

ELECTRICAL AND THERMAL PROPERTIES:			
Thermal Conductivity:	7.23 **W/mK**	**Dielectric Constant (1KHz):**	N/A
***Volume Resistivity @ 23°C:**	0.0005 **Ohm-cm**	**Dissipation Factor (1KHz):**	N/A

OPTICAL PROPERTIES @ 23°C:			
Spectral Transmission:	N/A	**Index of Refraction:**	N/A

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