Resinlab®
AN ELLSWORTH ADHESIVES COMPANY

TECHNICAL DATA SHEET EP1325

12/19/2016

N109 W13300 ELLSWORTH DRIVE GERMANTOWN, WI 53022
262-253-5900 FAX 262-253-5919

DESCRIPTION:

Resinlab® EP1325 is a one part, thixotropic, heat curing epoxy adhesive. This product can be used as a component staking compound paste adhesive or a dam barrier in a "dam and fill" application when used in conjunction with EP1320 or EP1320LV. It is a high performance polymer system requiring low shrinkage, and excellent adhesion to a wide variety of plastics, metals and circuit board materials. EP1325 provides very good environmental protection and dielectric properties over a wide temperature range.

This product can cure as low as 85 °C with temperatures in the 100 °C to 150 °C being most commonly used.

TYPICAL PROPERTIES:

All properties given are at 25 °C unless otherwise noted.

Property:	*Value:*	*Test Method or Source:*
Color	Black	Visual
Cure Schedule	5-10 minutes @ 150 °C 15 minutes @ 120 °C 30 minutes @ 110 °C 60 minutes @ 85 °C	
Viscosity	500,000 cps	TM R050-12 Brookfield RVT, #7, 2.5 RPM
Specific Gravity	1.3	TM R050-16
Glass Transition Temperature/Tg	115 °C (see additional information below)	R050-61 by DSC
Hardness	85 Shore D	R050-17/ASTM D2240
Water Absorption	0.17% after 24 hours	R050-35/ASTM D570
Exothermic Energy and **Onset Temperature**	142.5 J/g 90 °C	R050-61 by DSC
Tensile Properties: **Strength** **Elongation** **Modulus**	 2,500 psi 0-1% 700,000 psi	R050-36/ASTM D638
Lap Shear Strength **0.010" bond line Al to Al**	 1,500 psi	R050-37/ASTM D1002 Abraded with MEK wipe
Compressive Properties: **Strength** **Modulus**	 12,000 psi 600,000 psi	R050-38/ASTM D695
Thermal Conductivity by LFA	0.36 W/m.K*	
Volume Resistivity	8 x 10^{14} ohm-cm*	
Dielectric Strength	440 V/mil*	
Dielectric Constant	3.5 @ 100 Hz*	
Coefficient of Thermal Expansion	48 ppm / °C*	
Temperature range **	-40 to 150 °C**	

* Asterisk denotes values considered typical to associated resin systems or extrapolated from other test results.

** Temperature Rating is based on average design requirements and is not intended as a guarantee of suitability for all applications operating at that temperature.

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Approximate time to 90% cure at various temperatures by DSC

Temperature	90% cure
85 °C	30 minutes
95 °C	15 minutes
110 °C	5-10 minutes
120 °C	5-10 minutes
130 °C	< 5 minutes
140 °C	< 5 minutes
150 °C	< 5 minutes

NOTE: This chart reflects the thermal response of a very small sample run in a DSC, actual assemblies will require longer times to cure due to heat transfer, mass and method of heating. The cure schedule provided on page 1 provides times and temperatures recommended for use in a typical application.

INSTRUCTIONS:

1. Bring product to room temperature prior to mixing.
2. Apply heat to cure.
3. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.
4. Clean up uncured resin with suitable organic solvent such as MEK, acetone or other organic solvent.

SHELF LIFE AND STORAGE:

6 months at 5 °C or less
1 month at 25 °C
Specialty packaging may be less.
Product is sensitive to excursions above room temperature.
Usable shelf life is dependent upon method of application, storage conditions and user's requirements.

Note: EP1325 is sensitive to excursions above room temperature. Exposure to higher temperature, or cycling of product temperature, will shorten product shelf life.

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