

W186 N11687 MORSE DRIVE GERMANTOWN, WI 53022
262-502-6610 FAX 262-502-4743

DESCRIPTION:

Resinlab™ EP1225 Black is a two part unfilled epoxy adhesive designed for bonding of metals, ceramics and most plastics. It has a slightly thixotropic viscosity to give gap filling ability but still self level before cure. It cures to a tough semi-rigid polymer providing excellent protection against water, humidity, salt spray and other chemicals.

It was especially formulated to a 2A:1B volume mix ratio for use in side-by-side dispensing cartridges and meter/mix and dispense equipment. Cure is normally achieved at room temperature within 24 hours. Elevated temperatures can be used to accelerate development of cured properties. 65°C for 10 minutes is usually sufficient to obtain a tack free surface, full cure in 60 minutes. Time to heat substrate must be taken into account. Cooler temperatures will also extend work time and increase cure times.

TYPICAL PROPERTIES:

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

<u>PROPERTY:</u>		<u>VALUE:</u>	<u>TEST METHOD:</u>
Color		Black	
Viscosity			TM R050-12
RVT, #6, 2.5 RPM	Part A	150,000 cps (mPa-s)	
RVT, #4, 2.5 RPM	Part B	3,000 cps (mPa-s)	
	Mixed	30,000 cps (mPa-s)	
Specific Gravity	Part A	1.12	TM R050-16
	Part B	0.97	
	Mixed	1.07	
Pot Life		10-20 min.	TM R050-19
Mass		50 grams	
Hardness		60	TM R050-17
Scale		Shore-D	
Water Absorption		1.05 %	TM R050-35
24 Hours			
Temperature Range **		-40 to 100°C	



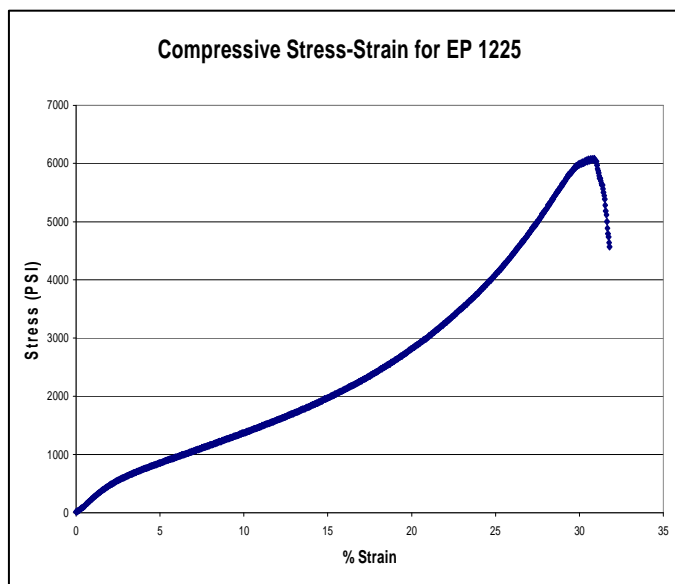
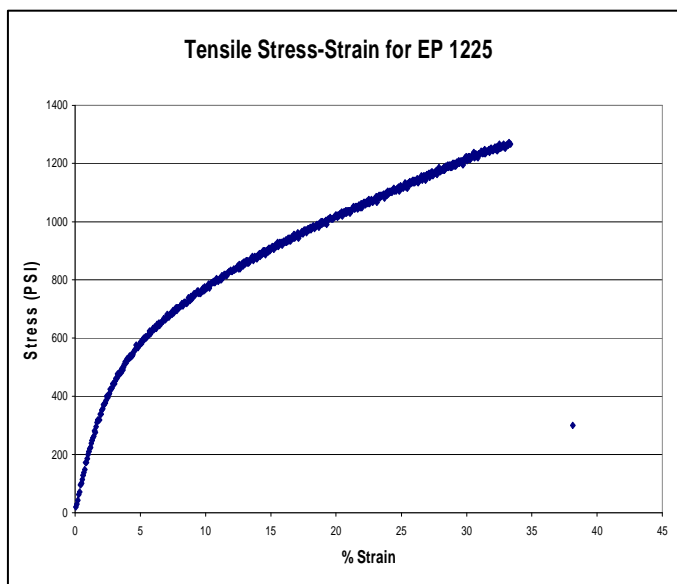
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TECHNICAL DATA SHEET EP1225 Black

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<u>PROPERTY:</u>	<u>VALUE:</u>		<u>TEST METHOD:</u>
Tensile	PSI	N/mm²	TM R050-36
Yield Strength	400	2.8	
Ultimate Strength	1,300	9.0	
Break Strength	1,300	9.0	
Elongation At Break	25-45 %		
Modulus	20,000	137.9	
Lap Shear Strength (2024 T3 Al Abraded / MEK Wipe)	2,000	13.8	TM R050-37
Compressive			TM R050-38
Yield Strength	500	3.4	
Ultimate Strength	6,000	41.4	
Break Strength	6,000	41.4	
Modulus	25,000	172.4	





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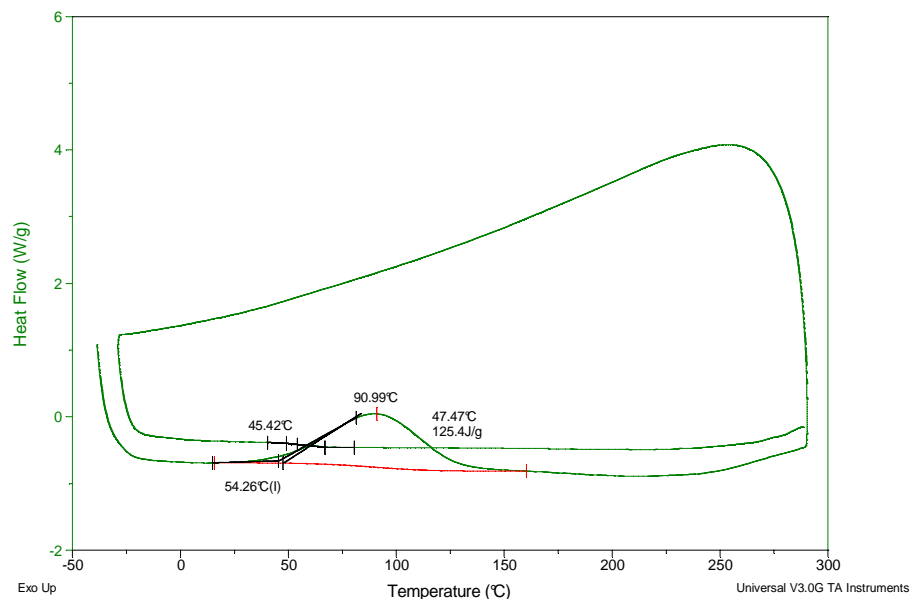
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<u>PROPERTY:</u>	<u>VALUE:</u>	<u>TEST METHOD:</u>
Linear Coefficient of Thermal Expansion	112 ppm/°C (below Tg)* 190 ppm/°C (below Tg)*	
Thermal Conductivity	0.156 BTU/(hr·ft·°F) * 0.27 W/m° K *	
Dielectric Constant (25°C, 100Hz)	6.3 *	
Dielectric Strength	765 V/mil * 30.1 kV/mm *	
Volume Resistivity	1.2 x 10 ¹¹ ohm-cm *	
Glass Transition	54°C	TM R050-25
Exothermic Energy	125.4 J/g	
Onset Temp (by DSC)	46°C	

Sample: EP 1225
Size: 13.4000 mg
Method: Baseline and Calibration
Comment: 300 Full Cure + Tg

DSC

File: Z:\...DSC\EP 1225\EP 1225.001
Operator: NVo
Run Date: 7-Nov-07 11:25



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INSTRUCTIONS:

1. Bring both components to room temperature prior to mixing. Cartridges should be stored in a vertical position to allow any air to accumulate at the tip. Mixer should be attached keeping the cartridge vertical and any air pocket purged this way. After mixer contains material, mixer tip can be dropped to dispense pre-bleed amount.
2. If used in bulk, weigh and mix parts A and B accurately and thoroughly, scraping sides of container often. Do not pour from mixing container, transfer to a new container as residual unmixed material may cause a tacky spot on surface of casting. If product is used in a side-by-side cartridge, attach a new static mixer with each cartridge, pre-bleed the first 3 inches of dispensed material or until a uniform color is obtained. Maintain adequate velocity during dispensing to ensure complete mixing.
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.

SIDE - BY - SIDE CARTRIDGE SUITABILITY RATING

POOR FAIR AVERAGE GOOD EXCELLENT

This rating scale is a general guideline to give the user an expected level of success in a typical bench-top dispensing scenario.

Important process variables to consider are: Cartridge type and size, wall thickness; manual or pneumatic gun type; static mixer design and dimensions; product viscosity spread and ratio; shot size, shot frequency, flow rate; temperature range during use.

This scale also address's product stability in a cartridge. Factors such as filler content and settling rate, storage temperature and cartridge orientation are important factors which affect this.

It is important for the user to define the optimum static mix for each dispensing process, a change in any of the above variables can affect the mix quality. Dispensing the product on a flat surface using the dispensing pattern can help show the quality of mixing in terms of thoroughness and lead/lag consistency.

<u>MIX RATIO:</u>	(Parts A to B)	
	by weight	100 to 45
	by volume	2 to 1

* 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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Notes:

Values presented above are considered to be typical properties, not to be used for specification purposes. Contact our Technical Department for further information.

Many epoxy resin systems are prone to crystallization as epoxy resin is a super-cooled fluid. This condition may give the product a gritty or grainy appearance (or hazy in clear products). Products in this state will not usually cure to normal and expected properties. In extreme cases it may appear solid and cured. Fluctuating temperatures (within 5 to 50°C) aggravate this phenomena. Heating the individual component to 50 to 60°C while stirring can usually restore products to original state. Storage at 25 +/- 10°C is optimum for most products.

SHELF LIFE: 12 months at 25°C. Specialty packaging may be less.