

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

### DESCRIPTION:

*Resinlab™* EP1056LV Black is a two part urethane modified epoxy casting resin designed to give good adhesion to metals and PVC. It has good wetting to most surfaces and is free-flowing to penetrate components and give good self-leveling and air release. It has very good resistance to water, acids and bases and most organic solvents.

It was especially formulated to a 2A:1B mix ratio for use in automatic mixing equipment and dispensers with static mixers. EP1056LV Black will reach handle cure at room temperature within 8 – 16 hours. Cure time can be accelerated by the application of heat. Times and temperatures from 1 hour at 65°C to 15 minutes at 100°C are typical for most applications. Cooler temperatures will also extend work time and increase cure times.

### TYPICAL PROPERTIES:

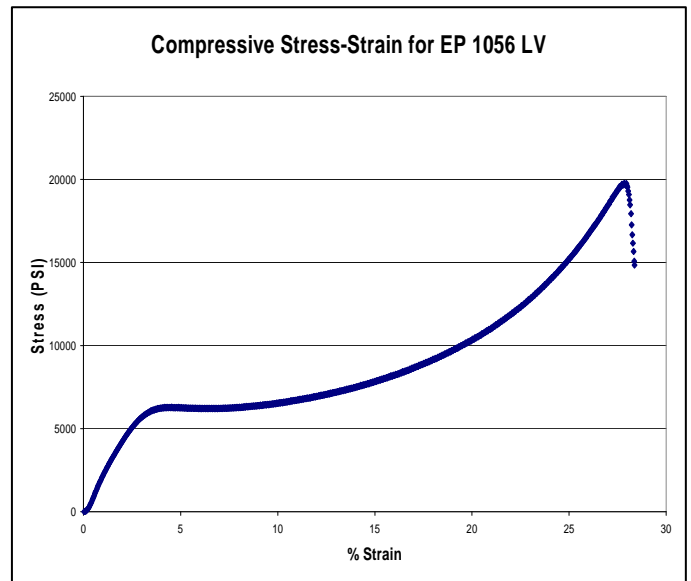
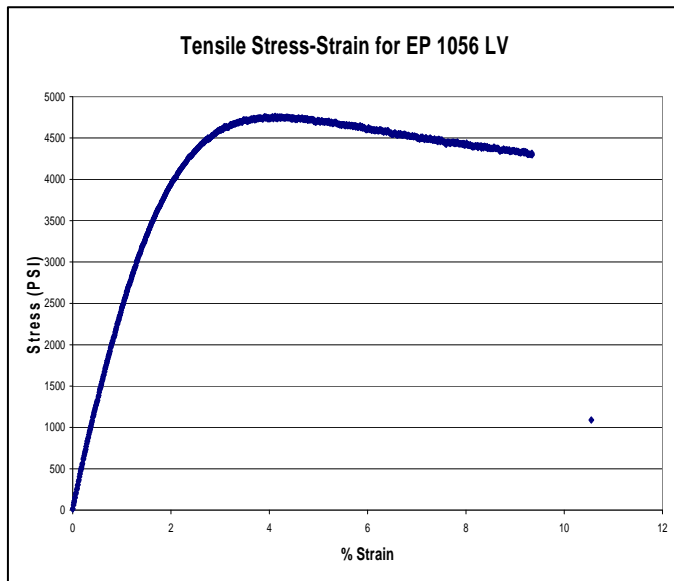
All properties given are at 25°C unless otherwise noted.

<u>PROPERTY:</u>		<u>VALUE:</u>	<u>TEST METHOD:</u>
Color		Black	
Viscosity			TM R050-12
RVT, #7, 20 RPM	Part A	23,000 cps (mPa-s)	
RVT, #3, 20 RPM	Part B	300 cps (mPa-s)	
	Mixed	10,000 cps (mPa-s)	
Specific Gravity	Part A	1.25	TM R050-16
	Part B	0.95	
	Mixed	1.15	
Pot Life		30-40 min.	TM R050-19
Mass		50 grams	
Hardness		80	TM R050-17
Scale		Shore-D	
Water Absorption		0.22 %	TM R050-35
24 hours			
Temperature Range **		-40 to 150°C	

W186 N11687 MORSE DRIVE GERMANTOWN, WI 53022

262-502-6610 FAX 262-502-4743

<u>PROPERTY:</u>	<u>VALUE:</u>		<u>TEST METHOD:</u>
Tensile	<b>PSI</b>	<b>N/mm<sup>2</sup></b>	TM R050-36
Yield Strength	2,300	15.9	
Ultimate Strength	4,800	33.1	
Break Strength	4,400	30.3	
Elongation At Break	5-7 %		
Modulus	270,000	1,865	
Lap Shear Stress (2024 T3 Al Abraded / MEK Wipe)	3,500	24.1	TM R050-37
Compressive			TM R050-38
Yield Strength	5,500	37.9	
Ultimate Strength	20,000	137.9	
Break Strength	20,000	137.9	
Modulus	180,000	1,240	



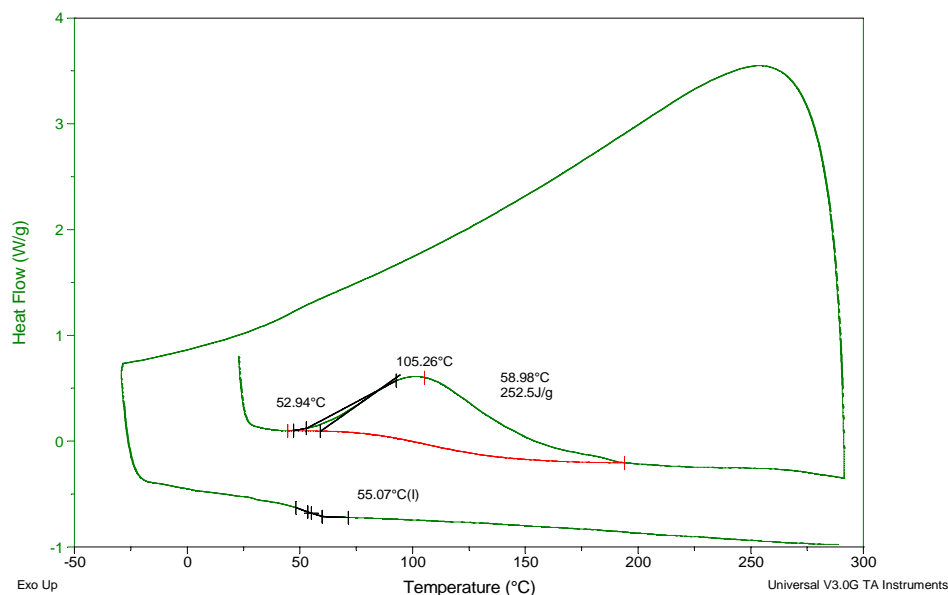
W186 N11687 MORSE DRIVE GERMANTOWN, WI 53022  
262-502-6610 FAX 262-502-4743

<u>PROPERTY:</u>	<u>VALUE:</u>	<u>TEST METHOD:</u>
Linear Coefficient of Thermal Expansion	55 ppm/°C *	
Thermal Conductivity	0.116 BTU/(hr-ft.°F) * 0.20 W/m° K *	
Dielectric Constant (25°C, 100Hz)	4.5 *	
Dielectric Strength	410 v/mil * 16.1 kV/mm *	
Volume Resistivity	8 x 10 <sup>14</sup> ohm-cm *	
Glass Transition Temp	50°C	TM R050-25
Exothermic Energy	252.5 J/g	
Onset Temp (by DSC)	52°C	

Sample: EP 1056 LV  
Size: 13.9000 mg  
Method: HP DSC  
Comment: 300 Full Cure + Tg

DSC

File: Z:\DSC\EP 1056\EP 1056 LV.001  
Operator: NVo  
Run Date: 4-Sep-07 09:11



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

**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.

<b><u>MIX RATIO:</u></b>	Part A to B	
	by weight	100 to 40
	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.

---

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

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.