TECHNICAL DATA SHEET EP1056LC

03/26/2009

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

DESCRIPTION:

Resinlab™ EP1056LC is a two part urethane modified epoxy adhesive designed to give good adhesion to metals and hard to bond surfaces such as PVC. It is thixotropic to provide good gap filling ability and prevent running and sagging during cure. 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. EP1056LC 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 2 hours at 65°C to 10 minutes at 100°C are typical for most applications. 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.

PROPERTY:		VALUE:	TEST METHOD:
Color		Black	
Viscosity			TM R050-12
RVT, #7, 2.5 RPM	Part A	325,000 cps (mPa·s)	
RVT, #4, 2.5 RPM	Part B	4,000 cps (mPa·s)	
	Mixed	165,000 cps (mPa·s)	
Specific Gravity	Part A	1.17	TM R050-16
	Part B	0.97	
	Mixed	1.10	
Pot Life		30 min.	TM R050-19
Mass		50 grams	
Hardness		80	TM R050-17
Scale		Shore-D	
Water Absorption 24 hours		0.12 %	TM R050-35
Temperature Range**		-40 to 150°C	

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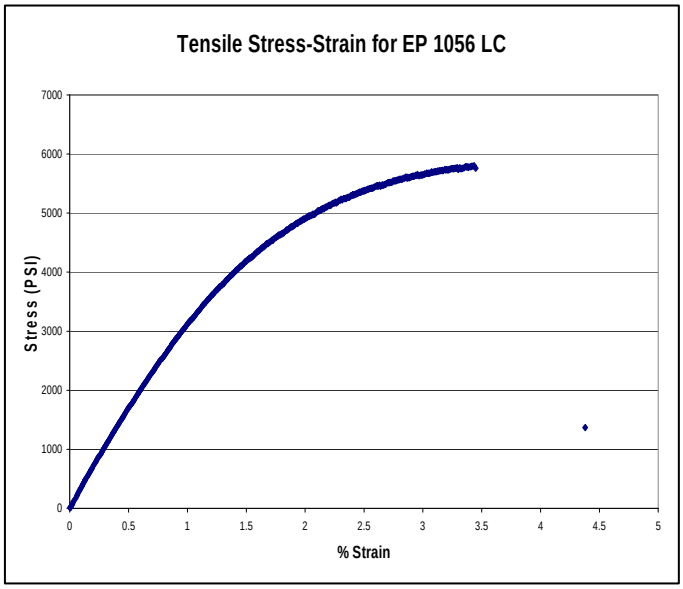
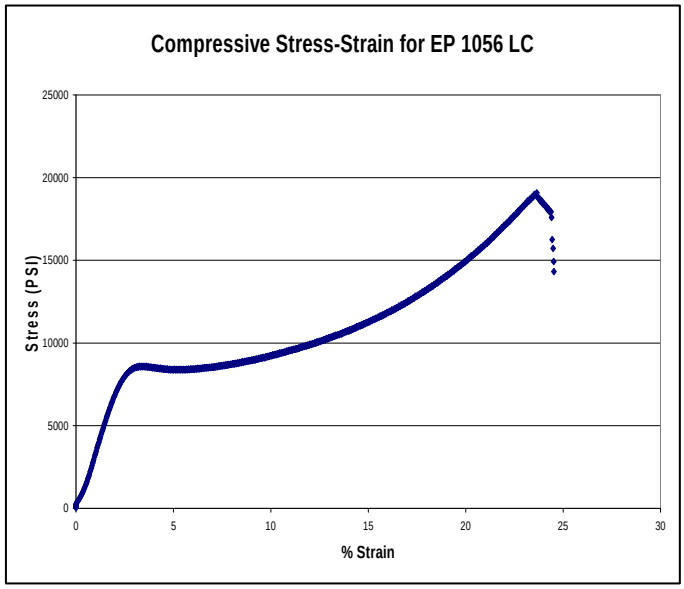
PROPERTY:	VALUE:		TEST METHOD:
Tensile	**PSI**	**N/mm^2**	TM R050-36
Yield Strength	1,500	10.3	
Ultimate Strength	5,000	34.5	
Break Strength	5,000	34.5	
Elongation At Break	2-3 %		
Modulus	350,000	2,415	
Lap Shear Strength (2024 T3 Al Abraded / MEK Wipe)	3,500	24.1	TM R050-37
Compressive			TM R050-38
Yield Strength	8,500	58.6	
Ultimate Strength	17,000	117.2	
Break Strength	16,500	113.8	
Modulus	340,000	2,345	





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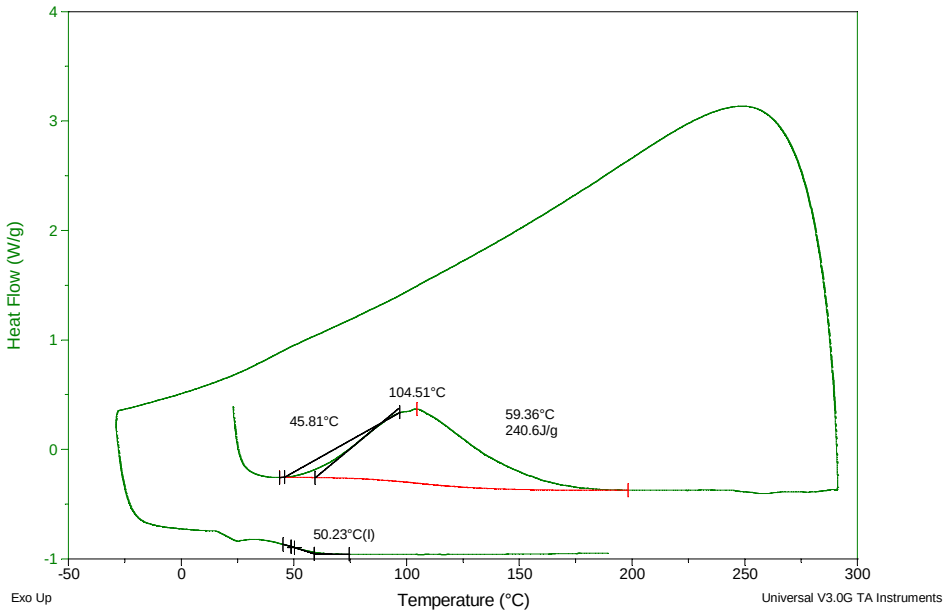
PROPERTY:	VALUE:	TEST METHOD:
Linear Coefficient of Thermal Expansion	55 ppm/°C*	
Thermal Conductivity	0.092 BTU/(hr·ft·°F) * 0.16 W/m° K *	
Dielectric Constant (25°C, 100Hz)	4.5 *	
Dielectric Strength	410 V/mil * 16.1 kV/mm *	
Volume Resistivity	8 x 10^{14} ohm-cm *	
Glass Transition Temperature	50°C	TM R050-25
Exothermic Energy	240.6 J/g	
Onset Temp (by DSC)	45°C	

Sample: EP 1056 LC
Size: 33.4000 mg
Method: HP DSC
Comment: 300 Full Cure + Tg

DSC

File: Z:...\DSC\EP 1056\EP 1056 LC.001
Operator: NVo
Run Date: 9-Oct-07 10:32



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CURE SCHEDULE: 24 – 72 hours at 25°C
or 2 hours @ 65°C

INSTRUCTIONS:

1) Bring to room temperature before use.

2) Weight and mix parts A and B accurately and thoroughly, scraping sides of container often.

3) Allow to cure undisturbed.

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.

MIX RATIO: (Part A to B)

by weight	245 to 100
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^{oC} while stirring can usually restore products to original state. Storage at 25 +/- 10°C is optimum for most products

SHELF LIFE: 12 Months