



AN ELLSWORTH ADHESIVES COMPANY 

TECHNICAL DATA SHEET EP1287

03/27/2009

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

DESCRIPTION:

Resinlab™ EP1287 is a two part filled, flame retardant epoxy syntactic foam. It utilizes glass microspheres to reduce cured density and improve machinability. This product will be self-extinguishing when tested to the FAR 25-853 specification. It also provides excellent protection against water, humidity, salt spray and other chemicals. It was formulated to an easy 2:1 volume mix ratio for use in meter-mix and dispense equipment.

EP1287 will cure to a firm handle strength at room temperature in about 4 to 8 hours. Full cure requires 24 hours. Cure time can be accelerated by the application of heat. Time to heat substrate must be taken into account. Cooler temperatures will also extend work time and increase cure times. Warming the cartridge will aid in increasing dispensing flow rate and boost cure speed. Depending upon method used to warm the cartridge care should be taken to avoid localized overheating. If a microwave is used, any metal components should be removed and user should carefully determine optimum time for each microwave as they can vary in power output.

TYPICAL PROPERTIES:

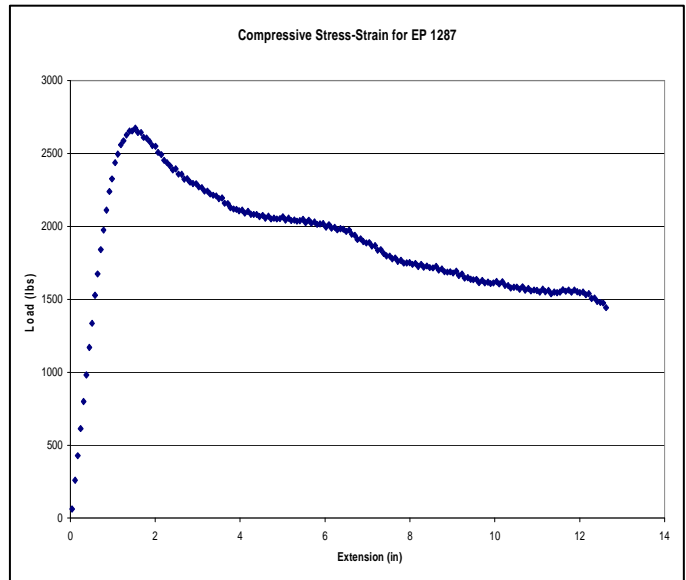
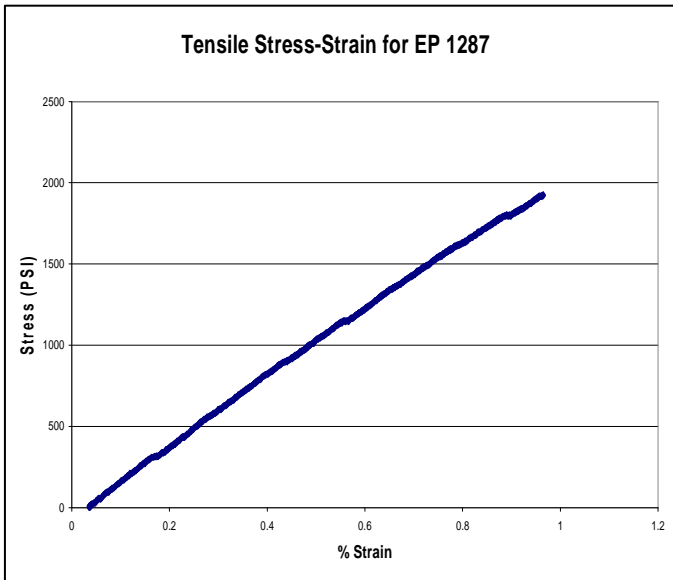
All properties given are at 25°C unless otherwise noted.

<u>PROPERTY:</u>		<u>VALUE:</u>	<u>TEST METHOD:</u>
Color		Orange	
Viscosity	Part A Part B Mixed	Soft Paste Soft Paste Soft Paste	TM R050-12
Specific Gravity	Part A Part B Mixed	0.62 0.56 0.60	TM R050-16
Pot Life		4-6 min.	TM R050-19
Mass		50 grams	
Hardness Scale		60 Shore-D	TM R050-17
Water Absorption 24 hours		0.44 %	TM R050-35
Temperature Range **		-40 to 150°C	

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<u>PROPERTY:</u>	<u>VALUE:</u>		<u>TEST METHOD:</u>
Tensile	PSI	N/mm²	TM R050-36
Yield Strength	500	3.4	
Ultimate Strength	2,000	13.8	
Break Strength	2,000	13.8	
Elongation At Break	1-2 %		
Modulus	200,000	1,380	
Lap Shear Strength (2024 T3 Al Abraded / MEK Wipe)	1,500	10.3	TM R050-37
Compression			TM R050-38
Yield Strength	2,500	17.2	
Ultimate Strength	2,700	18.6	
Break Strength	1,500	10.3	
Modulus	150,000	1,035	





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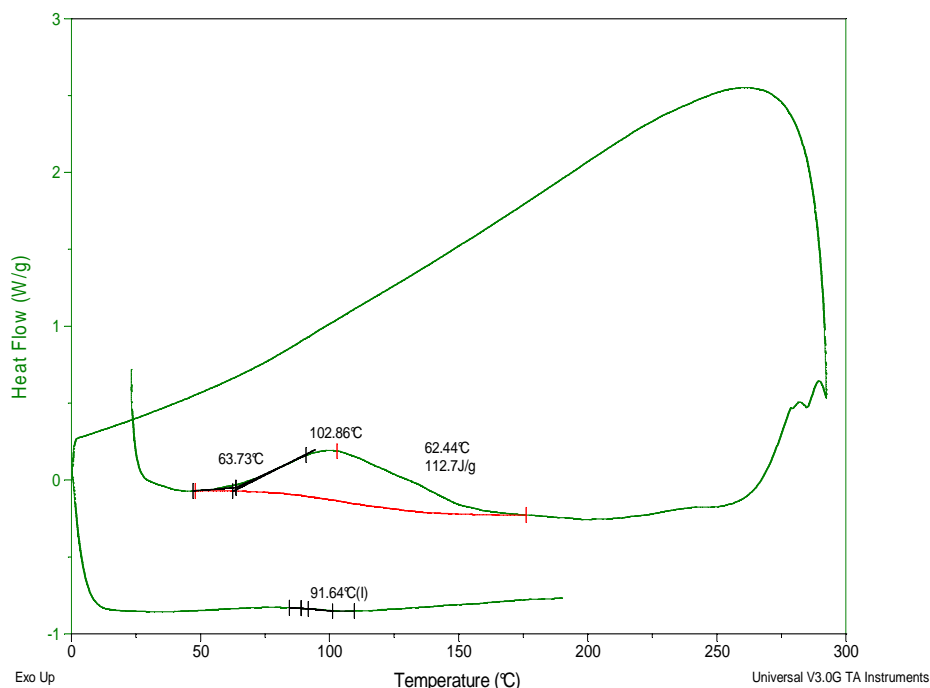
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<u>PROPERTY:</u>	<u>VALUE:</u>	<u>TEST METHOD:</u>
Glass Transition Temp	91°C	TM R050-25
Exothermic Energy	112.7 J/g	
Onset Temp (by DSC)	63°C	

Sample: EP 1287
Size: 12.1000 mg
Method: HP DSC
Comment: 300C Full Cure + Tg

DSC

File: Z:\DSC\EP 1287\EP 1287.001
Run Date: 27-Mar-08 12:51



CURE SCHEDULE:

24 – 72 hours at 25°C
or 2 - 3 hours @ 65°C

INSTRUCTIONS:

1. Bring both components to room temperature prior to mixing. Cartridges should be stored in a cool, dry place.
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

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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.

MIX RATIO: Mix Ratio (Part A to B):
by weight 2 to 1
by volume 2 to 1

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

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 phenomenon. 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: 6 months at 25°C. Specialty packaging may be less.



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