

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

DESCRIPTION:

ResinLab® Armstrong™ A-1 with Activator A is a two-part epoxy adhesive that has been formulated from specification-controlled epoxy resins and insert, high purity filler materials. These adhesives contain ingredients that impart low, surface-free energy characteristics, giving them excellent wettability to adherents that are traditionally hard to bond.

Activator A is a fast-reacting hardener which, when mixed at a ratio of 4 parts activator to 100 parts resin by weight, gives a fast “initial set” time. It is recommended for use when curing is to be done at room temperature. Accelerated cure can be completed within 2 hours at 75 °C.

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TYPICAL PROPERTIES:

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

Property:	Value:		Test Method or Source:
Color	Brown		Visual
Mix Ratio	Part A to Part B		Calculated
By weight	25 to 1		
By volume	16.6 to 1		
Cure Schedule	7 days @ 25 °C 2 hours @ 75 °C		
Viscosity – Part A	897,000 cps @1/s		Rheometer parallel plate 25mm
Viscosity – Part B	30 cps @1/s		455300006291
Viscosity - Mixed	103,000 cps @1/s		
Specific Gravity – Part A	1.43		Calculated
Specific Gravity – Part B	0.95		
Specific Gravity - Mixed	1.40		
Pot Life, defined as the time it takes for initial mixed viscosity to double	16 minutes		Rheometer parallel plate 25mm@1/s 455300006291
Hardness	80 Shore D		455300006287/ASTM D2240
Tensile Properties:	7 days @25 °C	2 hours @75 °C	Extrapolated from Henkel LDS
Strength	3,000 psi	4,000 psi	
Elongation	1%	2%	
Lap Shear Strength (Al to Al unless noted):	7 days @25 °C	2 hours @75 °C	Extrapolated from Henkel LDS
At Room Temperature	1,600 psi	2,400 psi	0.005” bond line
At 80 °C	1,460 psi	3,180 psi	
At -51 °C	1,100 psi	1,960 psi	
After 7 days in:			
Ammonia, 28%	1,820 psi	1,930 psi	
Distilled Water	1,730 psi	2,150 psi	

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Salt Water, 10%	1,980 psi	1,770 psi	
Acetone	1,980 psi	2,200 psi	
Glacial Acetic Acid	1,100 psi	2,250 psi	
Toluene	1,800 psi	2,000 psi	
Ethylendichloride	2,000 psi	2,050 psi	
Ethyl Acetate	1,380 psi	2,190 psi	
Hexane	1,250 psi	2,580 psi	
After 30 days in 100% R.H.	1,270 psi	3,070 psi	
Steel to Steel	1,850 psi	1,660 psi	
Compressive Properties:	7 days @25 °C	2 hours @75 °C	Extrapolated from Henkel LDS
Ultimate Compressive Strength	15,200 psi	13,400 psi	
Bond Strength	7 days @25 °C	2 hours @75 °C	Extrapolated from Henkel LDS
	1,150 psi	2,070 psi	
Cleavage	7 days @25 °C	2 hours @75 °C	Extrapolated from Henkel LDS
	830 psi	1,190 psi	
Coefficient of Thermal Expansion	7 days @25 °C	2 hours @75 °C	Extrapolated from Henkel LDS
	43 ppm/ °C	n/a	
Operating Temperature Range	-40 to 150 °C**		
Relative Thermal Index (RTI)	90 °C **		UL746B, Table 7.1 Generic Value Based on Composition

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

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

*** This TDS contains values that have been updated. The values reported in this technical data sheet are typical values of the product, and are highly dependent on test conditions and methodology. We actively seek the most precise and accurate ways to measure and interpret performance of our products, and to update estimated values with measured values. The formula has not been revised or changed in any way. Although the values on paper have changed, you can expect the same performance of the product.

INSTRUCTIONS:

1. Bring both components to room temperature prior to mixing.
2. Cartridge format: Mixer should be attached keeping the cartridge vertical and any air pocket purged this way. After the mixer contains material, the mixer tip can be dropped to dispense pre-bleed amount. Attach a new static mixer with each cartridge, then 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. Bulk format: 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 the surface of the casting. Maintain adequate velocity during dispensing to ensure complete mixing.

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4. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.
5. Clean up uncured resin with suitable organic solvent such as MEK, acetone or other organic solvent.

SHELF LIFE AND STORAGE:

12 months at 25 °C DOP
9 months at 25 °C DOP C-kit
Specialty packaging may be less.

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.