

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

DESCRIPTION:

ResinLab® Armstrong™ C-1 with Activator A is a two-part low viscosity unfilled resin system designed for electrical potting, adhesive and laminating applications. It will have excellent adhesion to most substrates. This system will react quickly when cured at room temperature or at elevated cure schedules. Room temperature cure is recommended.

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TYPICAL PROPERTIES:

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

<i>Property:</i>	<i>Value:</i>	<i>Test Method or Source:</i>
Color	Amber	Visual
Mix Ratio	Part A to Part B	Calculated
Mix Ratio by weight	12.5 to 1	
Mix Ratio by volume	10.4 to 1	
Cure Schedule	7 days @ 25 °C 2 hrs @ 75 °C	
Viscosity - Part A	3,500 cP	Extrapolated from Henkel LDS
Viscosity - Part B	10 cP	
Viscosity - Mixed	2,200 cP	
Specific Gravity - Part A	1.14	Calculated
Specific Gravity - Part B	0.95	
Specific Gravity - Mixed	1.12	
Pot Life defined as the time it takes for initial mixed viscosity to double	30 minutes	Extrapolated from Henkel LDS
Water Absorption	0.30 % (1 hour boil)	Extrapolated from Henkel LDS
Tensile Bond Strength/Butt Joint	1,340 psi after 2 hours @75 °C cure	Extrapolated from Henkel LDS
AC Dielectric Strength	> 17 kV/mm	Extrapolated from Henkel LDS
Coefficient of Thermal Expansion by TMA:		Extrapolated from Henkel LDS
below Tg	50 ppm/°C	
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.

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Additional Performance Data – Lap Shear Adhesion, Extrapolated from Henkel LDS:

Substrate Type	Strength	Test Temperature	Cure Schedule	Bond Line Thickness
Al to Al	1,780 psi	25 °C	7 days @ 25 °C	0.005 "
Al to Al	3,250 psi	25 °C	2 hrs @ 75 °C	0.005 "
Al to Al	200 psi	80 °C	7 days @ 25 °C	0.005 "
Al to Al	180 psi	80 °C	2 hrs @ 75 °C	0.005 "
Al to Al	1,560 psi	-51 °C	7 days @ 25 °C	0.005 "
Al to Al	2,810 psi	-51 °C	2 hrs @ 75 °C	0.005 "
Al to Al	1,530 psi After 7 days in ammonia, 28%	25 °C	7 days @ 25 °C	0.005 "
Al to Al	2,190 psi After 7 days in ammonia, 28%	25 °C	2 hrs @ 75 °C	0.005 "
Al to Al	1,600 psi After 7 days in distilled water	25 °C	7 days @ 25 °C	0.005 "
Al to Al	2,320 psi After 7 days in distilled water	25 °C	2 hrs @ 75 °C	0.005 "
Al to Al	1,780 psi After 7 days in salt water, 10%	25 °C	7 days @ 25 °C	0.005 "
Al to Al	2,400 psi After 7 days in salt water, 10%	25 °C	2 hrs @ 75 °C	0.005 "
Al to Al	1,350 psi After 7 days in acetone	25 °C	7 days @ 25 °C	0.005 "
Al to Al	2,010 psi After 7 days in acetone	25 °C	2 hrs @ 75 °C	0.005 "
Al to Al	630 psi After 7 days in glacial acetic acid	25 °C	7 days @ 25 °C	0.005 "
Al to Al	2,170 psi After 7 days in glacial acetic acid	25 °C	2 hrs @ 75 °C	0.005 "
Al to Al	1,550 psi After 7 days in toluene	25 °C	7 days @ 25 °C	0.005 "
Al to Al	3,140 psi After 7 days in toluene	25 °C	2 hrs @ 75 °C	0.005 "
Al to Al	1,650 psi After 7 days in ethylene dichloride	25 °C	7 days @ 25 °C	0.005 "
Al to Al	2,070 psi After 7 days in ethylene dichloride	25 °C	2 hrs @ 75 °C	0.005 "
Al to Al	1,400 psi After 7 days in ethyl acetate	25 °C	7 days @ 25 °C	0.005 "
Al to Al	2,220 psi After 7 days in ethyl acetate	25 °C	2 hrs @ 75 °C	0.005 "

TECHNICAL DATA SHEET

Armstrong™ C-1 with
Activator A

Revision date: 8/29/2024

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Al to Al	1,890 psi After 7 days in hexane	25 °C	7 days @ 25 °C	0.005 "
Al to Al	2,760 psi After 7 days in hexane	25 °C	2 hrs @ 75 °C	0.005 "
Al to Al	2,200 psi After 30 days in 100% RH	25 °C	7 days @ 25 °C	0.005 "
Al to Al	2,750 psi After 30 days in 100% RH	25 °C	2 hrs @ 75 °C	0.005 "
Steel to Steel	2,320 psi	25 °C	2 hrs @ 75 °C	0.005 "

Additional Performance Data – Tensile, Extrapolated from Henkel LDS:

Test Temperature	Strength	Elongation	Modulus	Cure Schedule
25 °C	7,650 psi	5.9 %	N/A	7 days @ 25 °C
25 °C	8,380 psi	5.4 %	N/A	2 hrs @ 75 °C

Additional Performance Data – Compression, Extrapolated from Henkel LDS:

Test Temperature	Offset (0.2%) Yield Strength	Yield Strength	Ultimate Strength	Modulus	Cure Schedule
25 °C	N/A	N/A	13,900 psi	N/A	7 days @ 25 °C
25 °C	N/A	N/A	15,500 psi	N/A	2 hrs @ 75 °C

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INSTRUCTIONS:

1. Bring to room temperature prior to use.
2. Bulk format: stir until homogeneous. 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.
3. Clean up uncured resin with suitable organic solvent such as MEK or acetone.
4. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.

SHELF LIFE AND STORAGE:

12 months at 25 °C.
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.