TECHNICAL DATA SHEET

Armstrong™ A-271

Revision date: 7/30/2024

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

DESCRIPTION:

ResinLab® Armstrong™ A-271 is an amber-colored clear two-part epoxy bonding adhesive. It exhibits good adhesion to glass due to its wetting ability and can also be used to bond most materials, including metals, plastics, wood, and ceramics. It has good moisture and chemical resistance and it suitable for use at intermediate "in service" temperatures up to 225 °F or 107 °C. Armstrong™ A-271 has low shrinkage and exotherm. Optimum cure for *Armstrong™ A-271* is 14 days at room temperature. This product can be used as a potting compound where glass and strain sensitive elements are being potted.

TYPICAL PROPERTIES:

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

Property:	*Value:*	*Test Method or Source:*
Color	Amber Clear	Visual
Mix Ratio **Mix Ratio by weight** **Mix Ratio by volume**	Part A to Part B 2.39 to 1 2 to 1	Calculated
Cure Schedule	14 days @ 25 °C 24 hrs @ 25 °C 30 min @ 93 °C 5 min @ 148 °C	Extrapolated from Henkel LDS
Viscosity - Part A **Viscosity - Part B** **Viscosity - Mixed**	9,000 cP 6,000 cP 9,000 cP	TA HR20 Rheometer 25mm parallel plate @ 1/s DCV6100723
Specific Gravity - Part A **Specific Gravity - Part B** **Specific Gravity - Mixed**	1.16 0.97 1.10	Calculated
Pot Life defined as the time it takes for initial mixed viscosity to double	53 minutes	TA HR20 Rheometer parallel plate 25mm @ 1/s DCV6100723
Work Life	90 minutes (100g sample)	Extrapolated from Henkel LDS
Hardness	80 Shore D	455300006287/ASTM D2240
Tensile Properties: **Strength** **Elongation**	 8,700 psi 10 %	Extrapolated from Henkel LDS
Coefficient of Thermal Expansion by TMA: **below Tg**	 49 ppm/°C	Extrapolated from Henkel LDS
Work Life	60 minutes (1 lb sample)	Extrapolated from Henkel LDS

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Property:	*Value:*	*Test Method or Source:*
Cleavage	1,500 psi	Extrapolated from Henkel LDS
Bond Strength	2,500 psi	Extrapolated from Henkel LDS
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.

Additional Performance Data – Lap Shear Adhesion, Extrapolated from Henkel LDS:				
Substrate Type	**Strength**	**Test Temperature**	**Cure Schedule**	**Bond Line Thickness**
Al to Al	2,000 psi	-51 °C	Extrapolated from Henkel LDS	0.005 "
Al to Al	2,800 psi	25 °C	Extrapolated from Henkel LDS	0.005 "
Al to Al	2,500 psi	82 °C	Extrapolated from Henkel LDS	0.005 "

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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.