

LOCTITE® AA 324

Known as LOCTITE® 324™
October 2021

PRODUCT DESCRIPTION

LOCTITE® AA 324 provides the following product characteristics:

Technology	Acrylic
Chemical Type	Urethane methacrylate ester
Appearance (uncured)	Transparent light amber liquid
Components	One component - requires no mixing
Viscosity	Medium
Cure	Anaerobic
Secondary Cure	Activator
Application	Bonding

LOCTITE® AA 324 is a general purpose structural adhesive that is specifically formulated for toughness and impact strength. LOCTITE® AA 324 cures when confined between close fitting parts with the aid of an activator. Applications include electric motors, loudspeaker hardware for bonding of ferrites and plated materials.

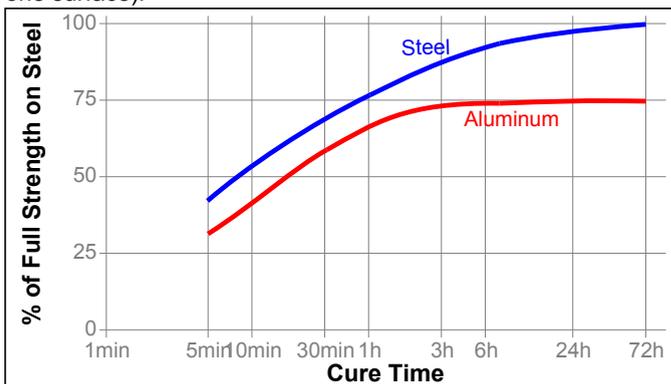
TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 23°C	1.06
Viscosity @ 25 °C, mPa.s (cP)	17,000
Brookfield – RVF	
Spindle 6, Speed 20rpm	

TYPICAL CURING PERFORMANCE

Cure Speed vs. Substrate

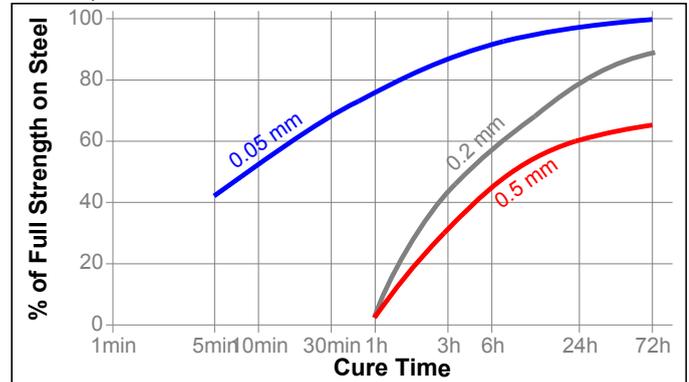
The rate of cure will depend on the substrate used. The graph below shows the shear strength developed with time @ 23°C on grit blasted steel lap shears compared to different materials and tested according to ISO 4587. (Activator 7387™ applied to one surface).



Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. The following graph shows the shear strength developed with time @ 23°C on grit blasted steel lap shears at different controlled gaps and tested according to ISO 4587. (Activator 7387™ applied to one

surface).



TYPICAL PERFORMANCE OF CURED MATERIAL

Cured for 7 days @ 23°C

Physical Properties

Elongation, at break, ISO 527-3, %	170
Tensile Strength	N/mm ² 34
ISO 527-2	(psi) (4,900)
Tensile Modulus	N/mm ² 614
ISO 527-2	(psi) (89,000)
Coefficient of Thermal Expansion, ISO 11359-2, K-1	80×10 ⁻⁶
Coefficient of Thermal Conductivity, W/(m·K) ISO 8302	0.1
Specific Heat, kJ/(kg·K)	0.3

Electrical Properties

Dielectric Constant / Dissipation Factor, IEC 60250:	
100 Hz	5.5 / 0.033
1 kHz	5.2 / 0.031
1 MHz	4.5 / 0.004
Dielectric Breakdown Strength, IEC 60243-1, kV/mm	73
Surface Resistivity, IEC 60093, Ω	2×10 ¹⁷
Volume Resistivity, IEC 60093, Ω·cm	8×10 ¹²

Adhesive Properties

After 24 hours @ 23 °C, Activator 7387™ on 1 side

Lap Shear Strength ISO 4587:

Steel (grit blasted):

0 mm gap	N/mm ² 18
	(psi) (2,600)
0.5 mm gap	N/mm ² 11
	(psi) (1,600)

TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 72 hours @ 23 °C, Activator 7387™ on 1 side

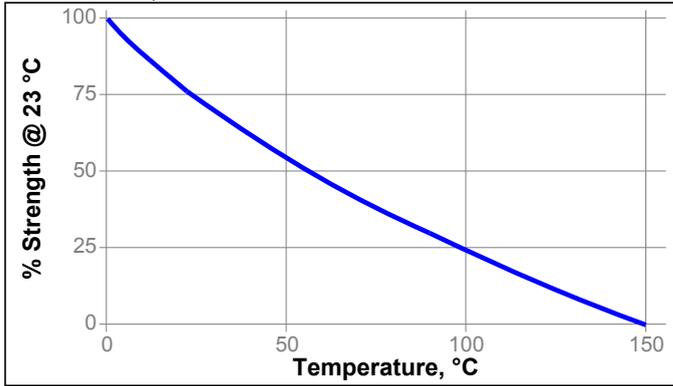
Lap Shear Strength :

Steel (grit blasted)

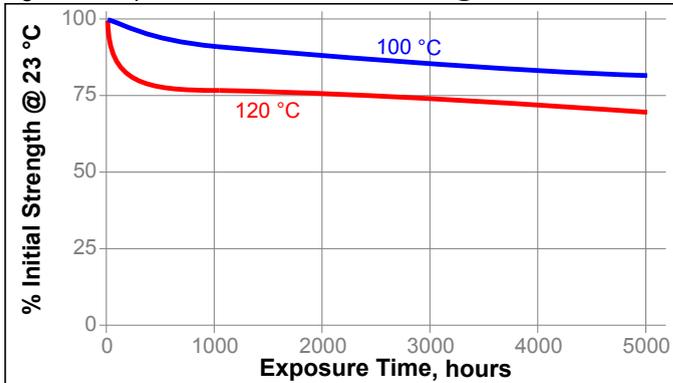


Hot Strength

Tested at temperature

**Heat Aging**

Aged at temperature indicated and tested @ 23 °C

**Chemical/Solvent Resistance**

Aged under conditions indicated and tested @ 23 °C

Environment	°C	% of initial strength	
			720 h
Motor oil (MIL-L-46152)	87		100
Humidity, 98% RH	50		50
Water/glycol 50/50	150		20

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Safety Data Sheet (SDS).

Where aqueous washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive. In some cases these aqueous washes can affect the cure and performance of the adhesive.

This product is not normally recommended for use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). Users are recommended to confirm compatibility of the product with such substrates.

Directions for use

- For best performance bond surfaces should be clean and free from grease.
- To ensure a fast and reliable cure, Activator 7387™ should be applied to one of the bond surfaces and the adhesive to the other surface. Parts should be assembled within 15 minutes.
- The recommended bondline gap is 0.1 mm. Where bond gaps are large (up to a maximum of 0.5 mm), or faster cure speed is required, Activator 7387™ should be applied to both surfaces. Parts should be assembled immediately (within 1 minute).
- Excess adhesive can be wiped away with organic solvent.
- Bond should be held clamped until adhesive has fixtured.
- Product should be allowed to develop full strength before subjecting to any service loads (typically 24 to 72 hours after assembly, depending on bond gap, materials and ambient conditions).

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties. Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Henkel representative.

Product Specification

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

Approval and Certificate

Please contact Henkel representative for related approval or certificate of this product.

Data Ranges

The data contained herein may be reported as a typical value. Values are based on actual test data and are verified on a periodic basis.

Temperature/Humidity Ranges: 23 °C / 50% RH = 23±2 °C / 50±5% RH

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\mu\text{m} / 25.4 = \text{mil}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Disclaimer

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as



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