

LOCTITE® AA 326

Known as LOCTITE® 326
August 2020

PRODUCT DESCRIPTION

LOCTITE® AA 326 provides the following product characteristics:

Technology	Acrylic
Chemical Type	Polyurethane methacrylate
Appearance (uncured)	Transparent, yellow to light amber liquid
Components	One component - requires no mixing
Viscosity	High
Cure	Anaerobic
Secondary Cure	Activator
Application	Bonding
Specific Benefits	Room temperature cure

LOCTITE® AA 326 is a general purpose structural adhesive that is used for fast cure and high shear strength. Typical applications include bonding ferrites to plated materials in electric motors, loudspeaker hardware and jewelry where fast fixturing is required.

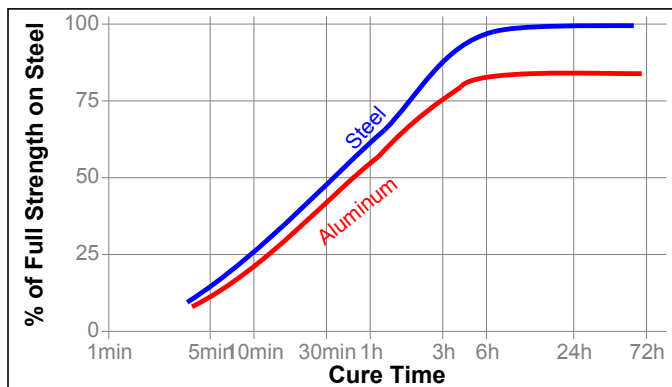
TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 23°C	1.05
Viscosity 25 °C, mPa.s (cP)	18,000
Brookfield – RVT Spindle 6, speed 20rpm	
Viscosity 25 °C, after 180 s, mPa.s (cP)	15,000
EN 12092- MV shear rate 36 s ⁻¹	

TYPICAL CURING PERFORMANCE

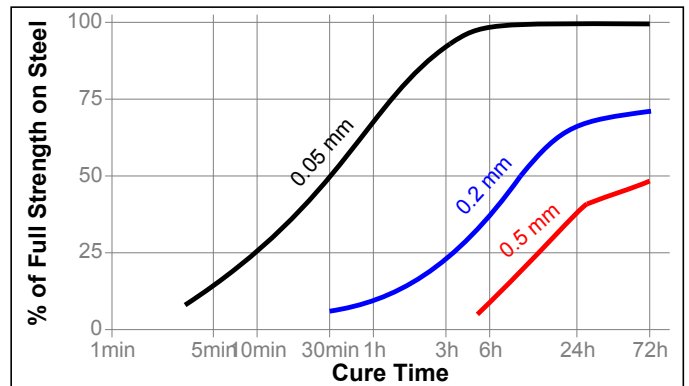
Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the shear strength developed with time on grit blasted steel lap shears compared to different materials and tested according to ISO 4587. (Activator 7649 applied to one surface)



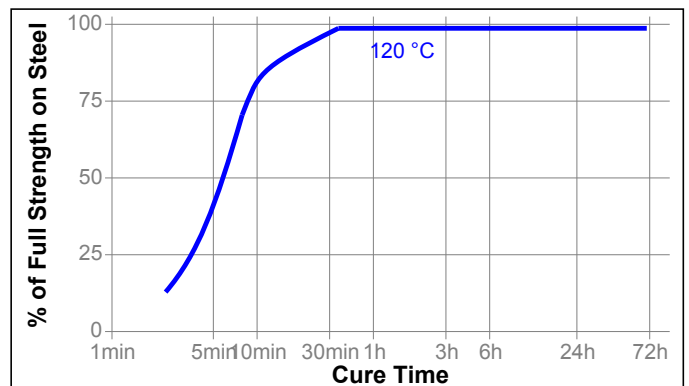
Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. The following graph shows shear strength developed with time on grit blasted steel lap shears at different controlled gaps and tested according to ISO 4587. (Activator 7649 applied to one surface)



Cure Speed vs. Temperature

The rate of cure will depend on the ambient temperature. The graph below shows shear strength developed with time at 120 °C on grit blasted steel lap shears and tested according to ISO 4587.



TYPICAL PERFORMANCE OF CURED MATERIAL

Cured for 7 days @ 23°C

Physical Properties:

Elongation, at break. ISO 527-3, %	135
Tensile Strength	N/mm ² 34
ISO 527-2	(psi) (4,900)
Tensile Modulus,	N/mm ² 300
ISO 527-2	(psi) (44,000)
Coefficient of Thermal Expansion,	80×10 ⁻⁶
ISO 11359-2, K-1	
Coefficient of Thermal Conductivity,	0.1
ISO 8302, W/(m.K)	
Specific Heat, kJ/(kg·K)	0.3

Electrical Properties:Dielectric Constant / Dissipation
Factor, IEC 60250:

100-Hz	5.6 / 0.03
1-kHz	5.3 / 0.03
1-MHz	4.6 / 0.04

Dielectric Breakdown Strength,
IEC 60243-1, kV/mm

30

Volume Resistivity, IEC 60093, $\Omega \cdot \text{cm}$ 2×10^{13} Surface Resistivity, IEC 60093, Ω 2×10^{17} **Adhesive Properties**

After 24 hours @ 23 °C, Activator 7649™ on 1 side

Lap Shear Strength, ISO 4587:

Steel (grit blasted)	N/mm ²	15.2
	(psi)	(2,200)

)

Tensile Strength, ISO 6922:

Steel (grit blasted)	N/mm ²	24
	(psi)	(3,500)

)

After 24 hours @ 23 °C, Activator 7649™ on 2 sides

Lap Shear Strength, ISO 4587:

Steel (grit blasted) :		
0.25 mm gap	N/mm ²	13.8
	(psi)	(2,000)

TYPICAL ENVIRONMENTAL RESISTANCE

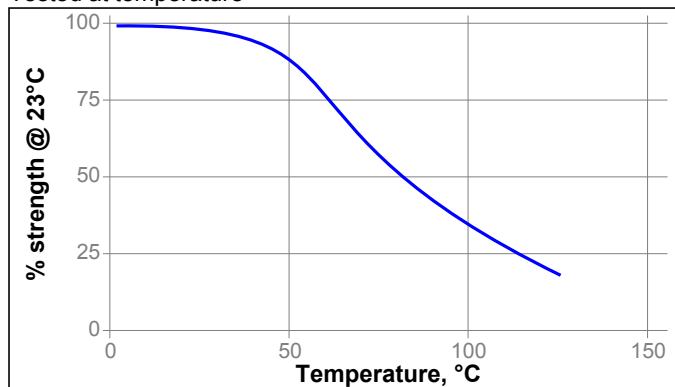
Cured for 1 week @ 23 °C, Activator 7649™ on 1 side

Lap Shear Strength ISO 4587:

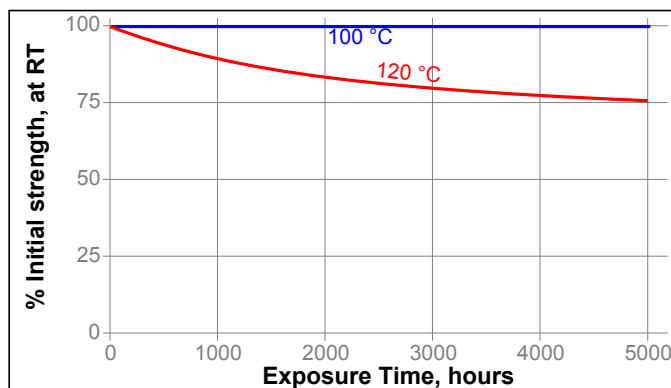
Steel (grit blasted)

Hot Strength

Tested at temperature

**Heat Aging**

Aged at temperature indicated and tested @ 23 °C

**Chemical/Solvent Resistance**

Aged under conditions indicated and tested @ °C

Environment	°C	% of initial strength			
		100 h	500 h	1000 h	5000 h
Motor oil (MIL-L-46152)	87	100	100	100	100
Leaded Petrol	22	100	60	60	60
ATF (Dextron II oil)	87	100	100	-	-
Phosphate ester	87	100	100	-	-
Humidity, 98% RH	40	85	50	45	45
Water/glycol 50/50	87	100	40	40	40

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

1. For best performance bond surfaces should be clean and free from grease.
2. To ensure a fast and reliable cure, Activator 7649™ should be applied to one of the bond surfaces and the adhesive to the other surface. Parts should be assembled within 15 minutes.
3. 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 7649™ should be applied to both surfaces. Parts should be assembled immediately (within 1 minute).
4. Excess adhesive can be wiped away with organic solvent.
5. Bond should be held clamped until adhesive has fixtured.
6. 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 a 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

(°C x 1.8) + 32 = °F
 kV/mm x 25.4 = V/mil
 mm / 25.4 = inches
 µm / 25.4 = mil
 N x 0.225 = lb
 N/mm x 5.71 = lb/in
 N/mm² x 145 = psi
 MPa x 145 = psi
 N·m x 8.851 = lb·in
 N·m x 0.738 = lb·ft
 N·mm x 0.142 = oz·in
 mPa·s = cP

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Reference 1.2