Technical Data Sheet

LOCTITE® AA 325™

Known as LOCTITE® 325™
November 2014

PRODUCT DESCRIPTION

LOCTITE® AA 325™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Modified acrylic ester
Appearance (uncured)	Clear, dark brown liquid[LMS]
Components	One component - requires no mixing
Viscosity	Medium
Cure	Anaerobic with activator
Cure Benefit	Room temperature cure
Application	Bonding

LOCTITE® AA 325™ typical applications include bonding metal or ceramic close fitting rigid parts which are exposed to thermal cycling, e.g. electric motor assemblies. LOCTITE® AA 325™ cures when confined between close fitting parts with the aid of an activator.

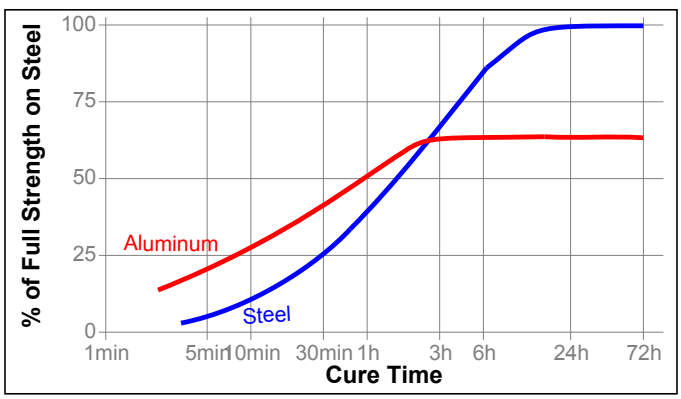
TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.1
Flash Point - See SDS	
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):	
Spindle 6, speed 20 rpm	14,000 to 25,000[LMS]

TYPICAL CURING PERFORMANCE

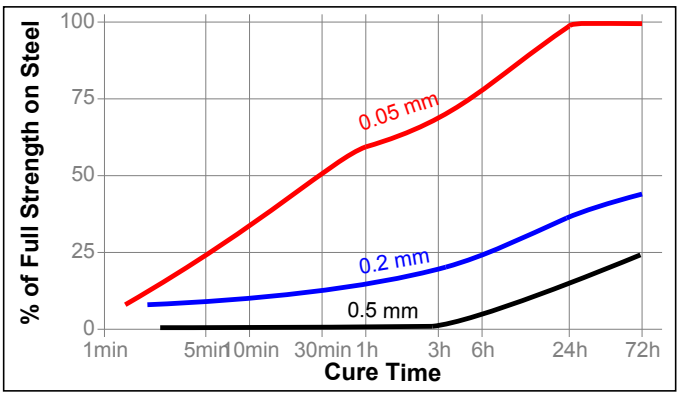
Cure Speed vs. Substrate

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 7075™ 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 on grit blasted steel lap shears at different controlled gaps and tested according to ISO 4587. (Activator 7075™ applied to one surface)



TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Coefficient of Thermal Expansion, ISO 11359-2,, K^{-1}	100×10^{-6}
Coefficient of Thermal Conductivity ISO 8302, W/(m·K)	0.1
Specific Heat, kJ/(kg·K)	0.3

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured for 24 hours @ 22°C, Activator 7075™ on 1 side

Lap Shear Strength, :		
Steel (grit blasted)	N/mm²	11
	(psi)	(1,595)

Cured for 48 hours @ 22°C, Activator 7075™ on 2 sides

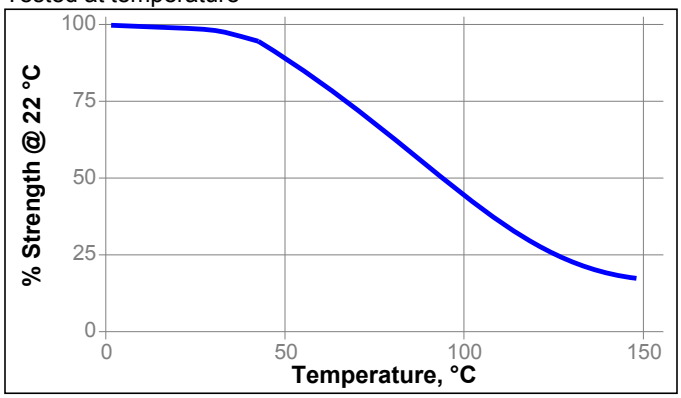
Lap Shear Strength, :		
Steel (grit blasted):		
0.5 mm gap	N/mm²	≥11[LMS]
	(psi)	(≥1,595)

TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 1 week @ 22 °C, Activator 7075™ on 1 side
Lap Shear Strength, :
Steel (grit blasted)

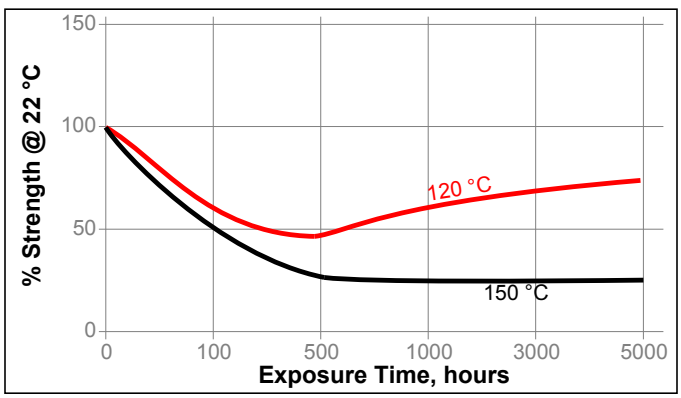
Hot Strength

Tested at temperature



Heat Aging

Aged at temperature indicated and tested @ 23 °C



Chemical/Solvent Resistance

Aged under conditions indicated and tested @ 23 °C.

		% of initial strength
Environment	**°C**	**720 h**
Air reference	87	100
Unleaded gasoline	87	75
Motor oil (10W30)	87	110
Auto trans. fluid	87	110
Phosphate ester	87	110
Water/glycol 50/50	150	75
Humidity, 100% RH	50	75

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 7075™ or 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.
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 7075™ or Activator 7387™ 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).

Loctite Material Specification[LMS]

LMS dated January 21, 2004. Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Quality.

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.

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

Disclaimer

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