Technical Data Sheet

LOCTITE® AA 330

Known as LOCTITE® 330™
June 2022

PRODUCT DESCRIPTION

LOCTITE® AA 330 provides the following product characteristics:

Technology	Acrylic
Chemical Type	Urethane methacrylate ester
Appearance (uncured)	Slightly cloudy, colorless to pale yellow liquid[LMS]
Components	One component - requires no mixing
Viscosity	High
Cure	With activator
Application	Bonding

LOCTITE® AA 330 is a general purpose adhesive that is used to bond metal, wood, ferrite, ceramic and plastic materials. Applications include tool handles, appliances, sporting goods and decorative trim.

NSF International

Registered to NSF Category P1 for use as a sealant where there is no possibility of food contact in and around food processing areas. **Note:** This is a regional approval. Please contact your local Technical Service Center for more information and clarification.

TYPICAL PROPERTIES OF UNCURED MATERIAL

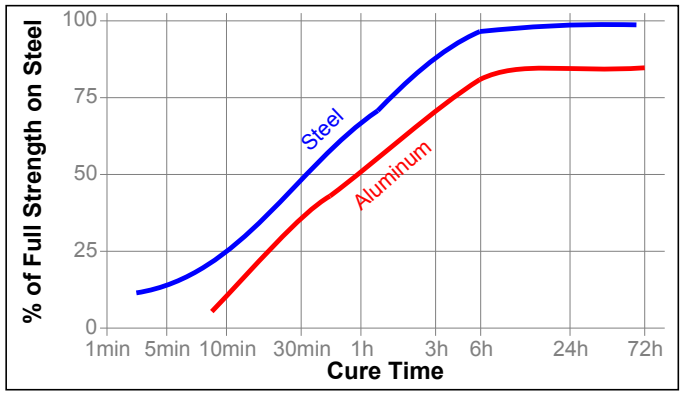
Specific Gravity @ 25 °C	1.05
Viscosity, Brookfield - RVT,25°C,mPa·s (cP):	
Spindle 7,, speed 20 rpm	45,000 to 90,000[LMS]
Viscosity, EN 12092 - SV, 25 °C, after 180 s, mPa·s (cP):	
Shear rate 20 s^{-1}	30,000 to 70,000

Flash Point - See SDS

TYPICAL CURING PERFORMANCE

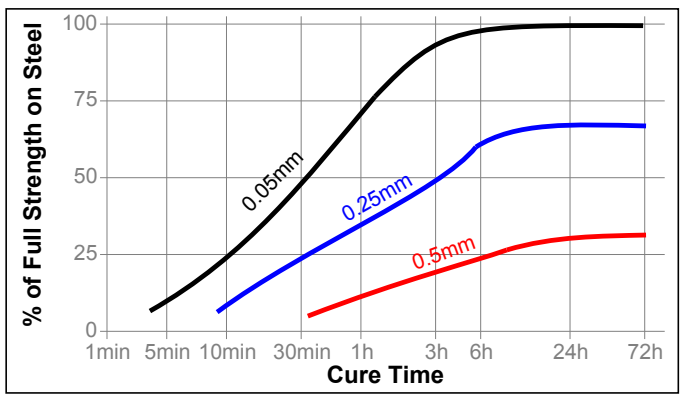
Cure Speed vs. Substrate

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 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 on grit blasted steel lap shears at different controlled gaps and tested according to ISO 4587. (Activator 7387™ applied to one surface).



TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Coefficient of Thermal Expansion, ISO 11359-2, K^{-1}	151×10^{-6}
Temperature Range: -25°C to 25°C	
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

After 24 hours @ 22°C, Activator 7387™ on 1 side

Lap Shear Strength ISO 4587:		
Mild steel (grit blasted)	N/mm²	15 to 30

	(psi)	(2,175 to 4,350)
Tensile Strength, ISO 6922:		
Mild steel (grit blasted)	N/mm²	12 to 22
	(psi)	(1,740 to 3,190)

After 24 hours @ 22°C, Activator 7387™ or 7386™ on 2 sides

Lap Shear Strength ISO 4587:		
Mild Steel (grit blasted)	N/mm²	≥16.5[LMS]
	(psi)	(≥2,390)

TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 1 week @ 22°C, Activator 7387™ on 1 side

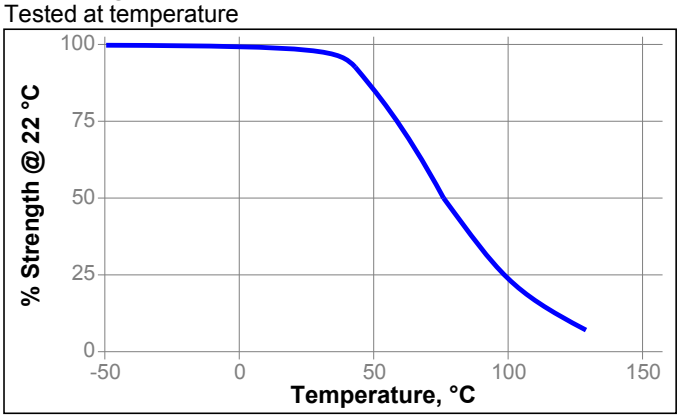
Lap Shear Strength ISO 4587:

Mild steel (grit blasted):

0.25 mm gap

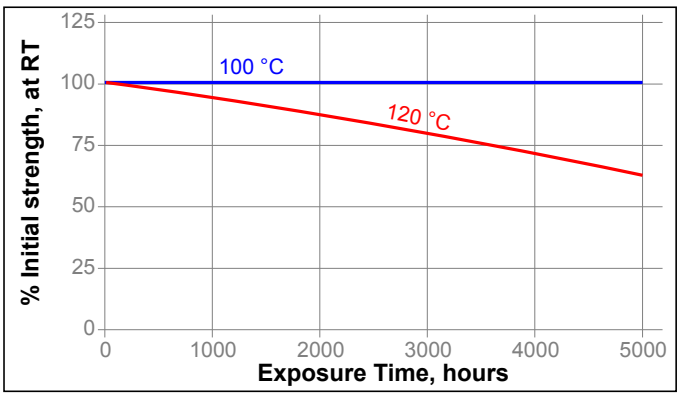
Hot Strength

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**	**350 h**	**720 h**
Acetone	22	10	10
Motor oil (MIL-L-46152)	87	90	66
Unleaded gasoline	22	20	20
Phosphate ester	87	93	75
Water/glycol 50/50	87	60	60

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.

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 7387 or 7386 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 7387 or 7386 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 March 11, 1996. 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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Reference 1.5