

## LOCTITE® AA 3252™

Known as LOCTITE® 3252™  
November 2014

### PRODUCT DESCRIPTION

LOCTITE® AA 3252™ provides the following product characteristics:

<b>Technology</b>	Acrylic
Chemical Type	Acrylic
Appearance, Resin (Component A)	Red liquid
Appearance, Hardener (Component B)	Green liquid
Appearance (Mixture)	brown
Components	Two component - requires mixing
Mix Ratio - Part A:Part B	1 : 1
Viscosity	Medium
<b>Cure</b>	Room temperature cure after mixing
<b>Application</b>	Bonding
Specific Benefit	Low odor, Non-flammable, Solvent free

LOCTITE® AA 3252™ typical applications include structural bonding of small rigid parts of dissimilar materials (e.g. ferrite to plated metals in electric motors and loudspeakers).

### TYPICAL PROPERTIES OF UNCURED MATERIAL

#### Part A:

Specific Gravity @ 25 °C	1.1
Flash Point - See SDS	
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):	
Spindle 4, speed 20 rpm	2,500 to 4,000
Viscosity, Cone and Plate, after 180 s, 25 °C, mPa·s (cP):	
Shear rate 36 s <sup>-1</sup>	1,500 to 3,500

#### Part B:

Specific Gravity @ 25 °C	1.2
Flash Point - See SDS	
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):	
Spindle 4, speed 20 rpm	2,500 to 4,000
Viscosity, Cone and Plate, after 180 s, 25 °C, mPa·s (cP):	
Shear rate 36 s <sup>-1</sup>	1,500 to 3,500

#### Mixed:

Gel Time @ 25 °C, seconds	5 to 10
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### TYPICAL CURING PERFORMANCE

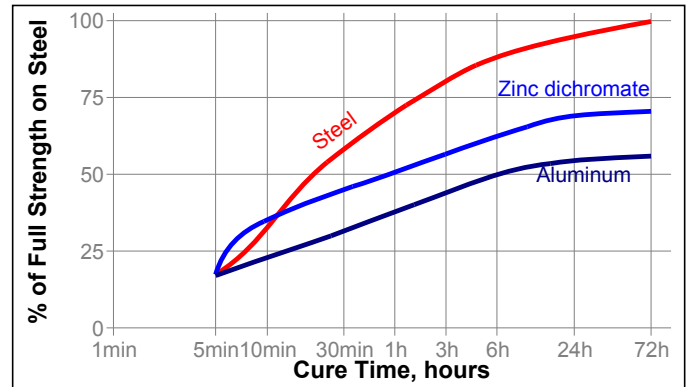
#### Fixture Time

Fixture time is defined as the time to develop a shear strength of 0.1 N/mm<sup>2</sup>.

Fixture Time, seconds:	
Steel (grit blasted)	20

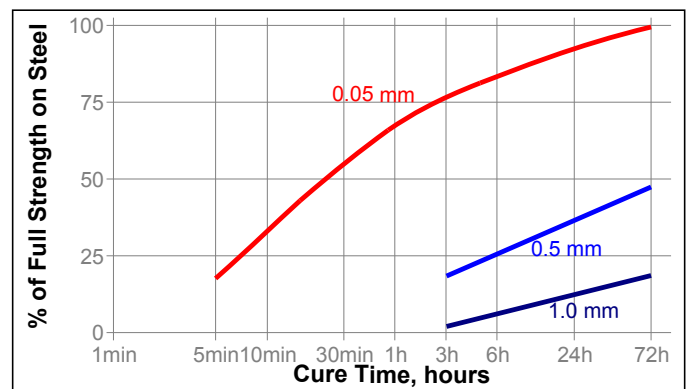
### Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the shear strength developed with time on steel lap shears compared to different materials and tested according to ISO 4587



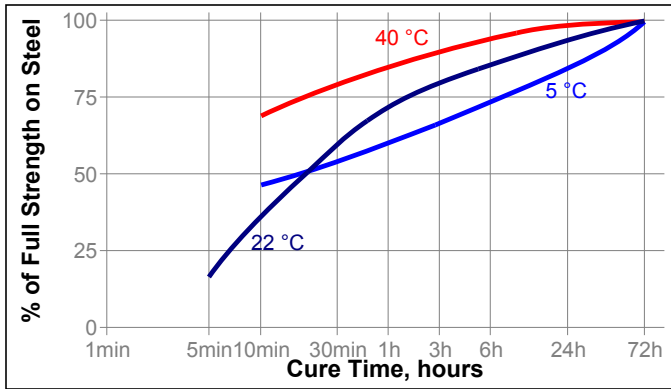
### Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. The following graph shows the shear strength developed with time on steel lap shears at different controlled gaps and tested according to ISO 4587.



### Cure Speed vs. Temperature

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



**TYPICAL PROPERTIES OF CURED MATERIAL**

Cured for 24 hours @ 22°C

**Physical Properties:**

Coefficient of Thermal Expansion, ISO 11359-2, K <sup>-1</sup>	120×10 <sup>-6</sup>
Coefficient of Thermal Conductivity, ISO 8302, W/(m·K)	0.3
Glass Transition Temperature, ASTM D 4065, °C	101
Shore Hardness, ISO 868, Durometer D	65

**Electrical Properties:**

Surface Resistivity, IEC 60093, Ω	5.6×10 <sup>-14</sup>
Volume Resistivity, IEC 60093, Ω·cm	3.3×10 <sup>-14</sup>
<b>Dielectric Constant / Dissipation Factor, IEC 60250:</b>	
1 kHz	4.4 / 0.02
100 kHz	4.0 / 0.03
1 MHz	3.7 / 0.05
10 MHz	3.5 / 0.07

Cured for 30 mins @ 180°C

**Physical Properties:**

Elongation, at break, ISO 527-3, %	7
Tensile Strength, ISO 527-3	N/mm <sup>2</sup> 15 (psi) (2,175)
Tensile Modulus, ISO 527-3	N/mm <sup>2</sup> 600 (psi) (87,000)

**TYPICAL PERFORMANCE OF CURED MATERIAL**

**Adhesive Properties**

Cured for 72 hours @ 22 °C

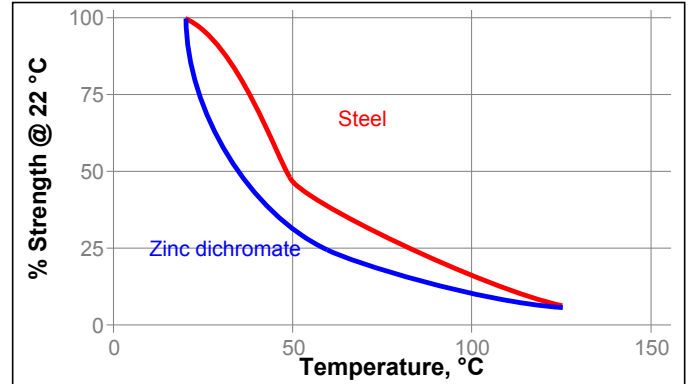
Lap Shear Strength, ISO 4587:			
Steel (grit blasted)	N/mm <sup>2</sup>	22.0	(psi) (3,190)
Zinc dichromate	N/mm <sup>2</sup>	12.5	(psi) (1,810)
Aluminum	N/mm <sup>2</sup>	12.0	(psi) (1,740)
"T" Peel Strength, ISO 11339:			
Aluminum (grit blasted)	N/mm	1.4	(lb/in) (8.0)

**TYPICAL ENVIRONMENTAL RESISTANCE**

Cured for 1 week @ 22 °C

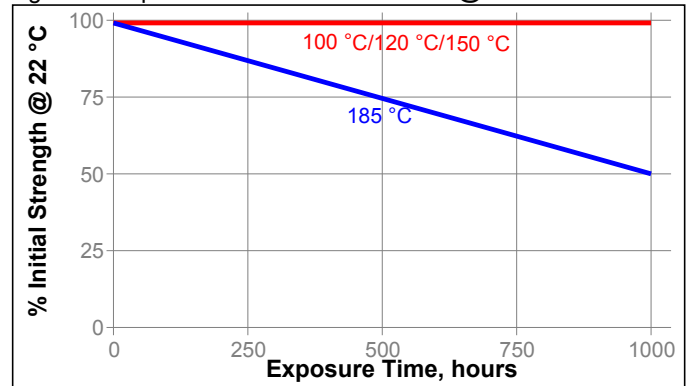
Lap Shear Strength, ISO 4587:	
Steel	

**Hot Strength**  
Tested at temperature



**Heat Aging**

Aged at temperature indicated and tested @ 22 °C



**Chemical/Solvent Resistance**

Aged under conditions indicated and tested @ 22 °C

Environment	°C	% of initial strength	
		500 h	1000 h
Humidity, 98% RH (steel, grit blasted)	40	30	25
Humidity, 98% RH (zinc dichromate)	40	30	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:**

1. For best performance bond surfaces should be clean and free from grease.
2. LOCTITE® AA 3252™ is applied bead-on-bead which mixes when joint is assembled.
3. Joint should be assembled within 10 seconds of adhesive application.
4. Avoid cross contamination of the two components of this product.
5. **CAUTION: This product should never be applied by static mixer due to very fast cure speed.**
6. Excess adhesive can be wiped away with organic solvent.
7. Bond should be held clamped until adhesive has fixtured.
8. 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).

**Not for product specifications**

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

**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 Technical Service Center or Customer Service Representative.

**Conversions**

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

**Note:**

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 differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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**Reference 1.1**