

LOCTITE® AA 3292™

Known as LOCTITE® 3292™
December 2013

PRODUCT DESCRIPTION

LOCTITE® AA 3292™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Methacrylate base
Appearance, Resin (Component A)	Dark red liquid ^{LMS}
Appearance, Hardener (Component B)	Dark green liquid ^{LMS}
Appearance (Mixture)	Purple
Viscosity	Medium
Components	Two component - requires mixing
Cure	Room temperature cure
Application	Bonding
Recommended Gap	0.25 mm (bead on bead application)
Maximum Gap	3.0 mm (applied through static mixer)

LOCTITE® AA 3292™ is a two component adhesive system which cures rapidly when mixed at room temperature. Typical applications include bonding of loudspeaker ferrites to plates and some non-metallic components such as spiders, cones and coils.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A:

Specific Gravity @ 25 °C	1.05
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP): Spindle 4, speed 20 rpm	2,300 to 4,500 ^{LMS}
Flash Point - See SDS	

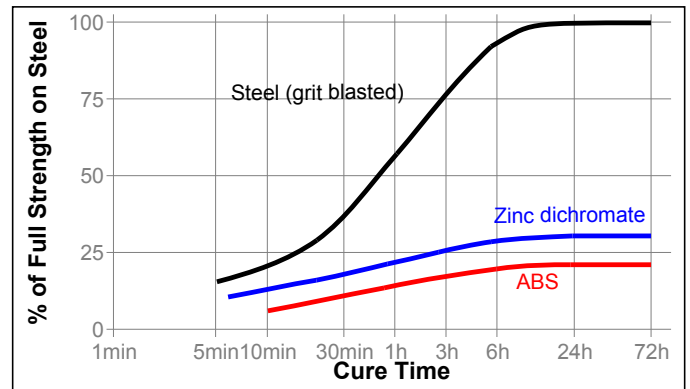
Part B:

Specific Gravity @ 25 °C	1.05
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP): Spindle 4, speed 20 rpm	2,500 to 4,000 ^{LMS}
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

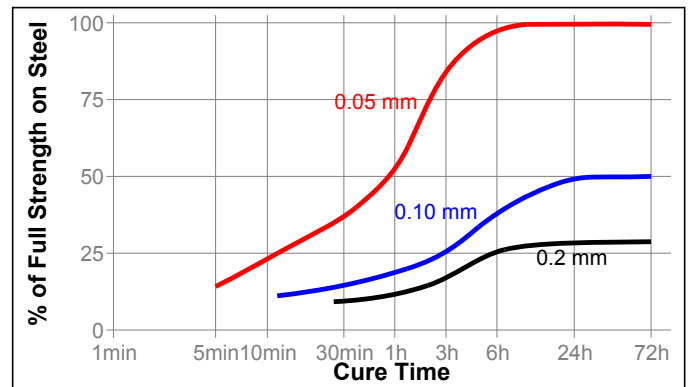
Cure Speed vs. Substrate

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 compared to different materials and tested according to ISO 4587.



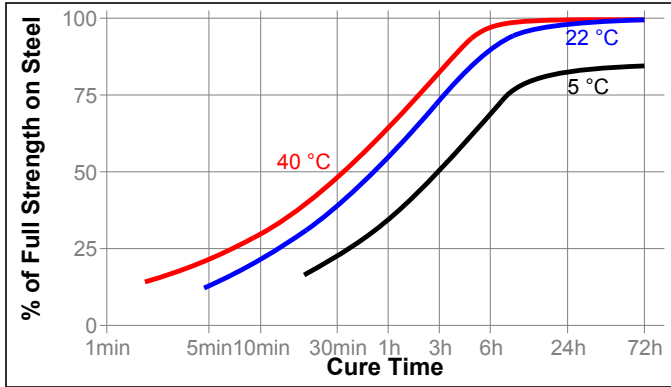
Cure Speed vs. Bond Gap

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



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

TYPICAL PERFORMANCE OF CURED MATERIAL

Cured for 24 hours @ 22 °C

Lap Shear Strength, ISO 4587:

Steel (grit blasted) N/mm² ≥20^{LMS} (psi) (≥2,900)
 Zinc dichromate N/mm² 7.5 to 15 (psi) (1,085 to 2,175)
 ABS N/mm² 5 to 10 (psi) (725 to 1,450)
 PVC N/mm² 5 to 10 (psi) (725 to 1,450)
 Polycarbonate N/mm² 5 to 10 (psi) (725 to 1,450)

"T" Peel Strength, ISO 11339:

Aluminum (grit blasted) N/mm 0.5 to 1.0 (lb/in) (2.8 to 5.7)

Tensile Strength, ISO 6922:

N/mm² 10 to 22 (psi) (1,450 to 3,190)

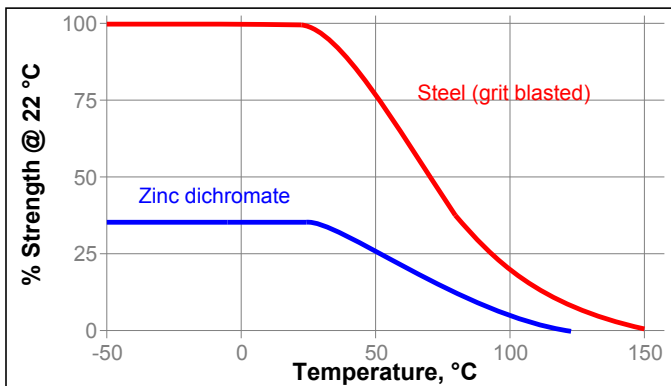
TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 24 hours @ 22 °C

Lap Shear Strength, ISO 4587

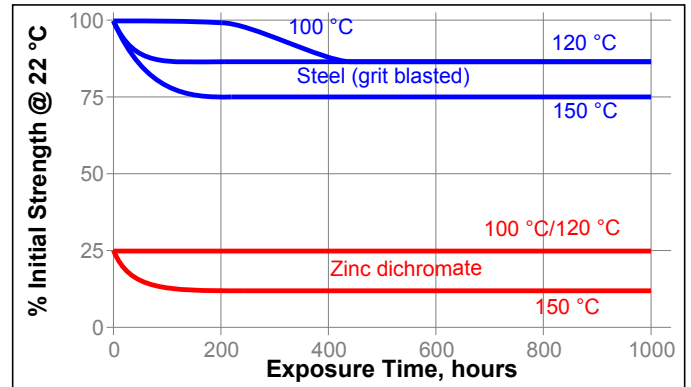
Hot Strength

Tested at temperature



Heat Aging

Aged at temperature indicated and tested @ 22 °C



Chemical/Solvent Resistance

Aged under conditions indicated and tested @ 22 °C.

Cured for 24 hours @ 22 °C

Lap Shear Strength, ISO 4587:

Steel (grit blasted)

Environment	°C	% of initial strength		
		100 h	500 h	1000 h
Isopropanol	22	80	80	80
Trichlorethylene	22	80	80	75
Acetone	22	75	75	75
98% RH	40	90	60	60
Hydrochloric acid, 10%	22	75	75	75
Motor oil	125	100	100	100
Water/glycol	22	50	50	50
Gasoline	22	90	90	90

Lap Shear Strength, ISO 4587:

Zinc dichromate

Environment	°C	% of initial strength		
		100 h	500 h	1000 h
Isopropanol	22	90	90	90
Trichlorethylene	22	90	90	90
Acetone	22	80	40	20
98% RH	40	100	100	100
Hydrochloric acid, 10%	22	80	80	80
Motor oil	125	90	90	90
Water/glycol	22	90	40	5
Gasoline	22	100	90	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.

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, product should be applied through a static mixer using appropriate dispensing equipment.
3. Open time in the static mixer is approximately 5 minutes. At longer times product will begin to gel but can be dispensed from the nozzle up to a maximum of 10 minutes. In this case, dispense until fresh product is obtained.
4. Avoid cross contamination of the two components of this product.
5. Remove static mixer when finished. To restart, ensure any gelled product is removed.
6. Parts should be assembled immediately (within 5 minutes).
7. Excess adhesive can be wiped away with organic solvent.
8. Bond should be held clamped until adhesive has fixtured.
9. 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 02, 1998 (Part A) and LMS dated August 25, 2000 (Part B). 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 Loctite Quality.

Storage

The product is classified as flammable and must be stored in an appropriate manner in compliance with relevant regulations. Do not store near oxidizing agents or combustible materials. Store product in the unopened container in a dry location. Storage information may also be indicated on the product container labelling.

Optimal Storage: 2 °C to 8 °C. Storage below 2 °C or greater than 8 °C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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

(°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

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