Technical Data Sheet

LOCTITE® AA H3101™

Known as LOCTITE H3101
January 2016

PRODUCT DESCRIPTION

LOCTITE® AA H3101™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Methacrylate
Appearance, Resin (Component A)	Pale milky white
Appearance, Hardener (Component B)	Light tan
Appearance (Mixture)	Pale yellow[LMS]
Components	Two component - requires mixing
Mix Ratio - Part A:Part B	1 : 1
Thixotropic	Reduced migration of liquid product after application to substrate
Cure	Room temperature cure
Application	Bonding
Specific Benefit	• Excellent environmental resistance • Excellent tolerance to off-ratio mixing • Superior impact and peel strength • Non-sagging gaps filled to 9.5 mm

LOCTITE® AA H3101™ is a highly thixotropic, two-component, room temperature curing, 1:1 mix ratio methacrylate adhesive system. This product is formulated to provide fixturing strength within 20 to 25 minutes and when fully cured forms a resilient bond that maintain its strength over a wide range of temperatures. LOCTITE® AA H3101™ is suitable for bonding a variety of substrates with a minimum of surface preparation.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A:

Specific Gravity @ 25 °C	1.04
Viscosity @ 25°C, mPa·s (cP)	80,000 to 110,000
Flash Point - See SDS	

Part B:

Specific Gravity @ 25 °C	0.96
Viscosity @ 25°C, mPa·s (cP)	45,000 to 70,000
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Open Time

Open Time, minutes	≥20

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured for 24 hours @ 25 °C

Block Shear Strength, ISO 13445:

PVC	N/mm²	1.2
	(psi)	(175)
ABS	N/mm²	7.2
	(psi)	(1,050)

Lap Shear Strength, ISO 4587:

Aluminum (etched)	N/mm²	≥20.6
	(psi)	(≥3,000[LMS])
Aluminum (anodised)	N/mm²	18
	(psi)	(2,615)
Aluminum	N/mm²	11.1
	(psi)	(1,610)
Aluminum (Alclad)	N/mm²	6.7
	(psi)	(965)
Steel	N/mm²	17
	(psi)	(2,500)
Galvanized Steel	N/mm²	4.9
	(psi)	(700)
Stainless steel	N/mm²	20
	(psi)	(2,910)
Polycarbonate	N/mm²	6
	(psi)	(870)
Zinc dichromate	N/mm²	3.1
	(psi)	(450)
FRP	N/mm²	10
	(psi)	(1,465)
Gelcoat	N/mm²	8.6
	(psi)	(1,255)

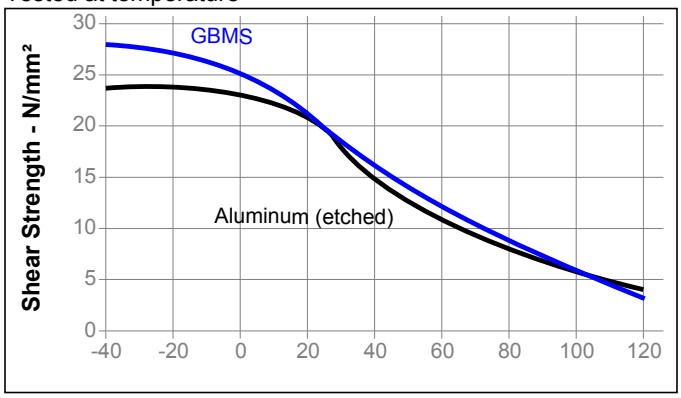
"T" Peel Strength, ISO 11339:

Aluminum	N/mm	3.8
	(lb/in)	(22)
Aluminum (etched)	N/mm	2.9
	(lb/in)	(16)

TYPICAL ENVIRONMENTAL RESISTANCE

Shear Strength vs Temperature
Lap Shear Strength, ISO 4587,

Tested at temperature



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).

Directions for use:
Mixing:

1. It is highly recommended that either meter mix equipment or cartridges with static mix nozzles be used to properly ratio and dispense the adhesive.
2. For hand mixing, combine Part A and Part B in the correct ratio and mix thoroughly.
3. Once mixed, LOCTITE® AA H3101™ should achieve a uniform color. This is important!
4. Heat buildup during and after mixing is normal. To reduce the likelihood of exothermic reaction or excessive heat buildup, mix less than 100 grams at a time. Mixing smaller amounts will minimize heat buildup.

Applying

1. Bonding surfaces should be clean, dry, and free of contamination
2. Extensive surface preparation is not required for LOCTITE® AA H3101™, and good bonds can be formed on most substrates after a solvent wipe
3. To assure maximum bond strength, surfaces must be mated within the adhesive's open time
4. Use enough material to completely fill the joint when parts are clamped

Curing

1. Parts should remain undisturbed during the interval of time between the material's open time and fixture time
2. After the fixture time is achieved the material has reached handling strength
3. Cure temperatures below room temperature will slow curing time; above room temperature will accelerate the cure

Clean up

1. It is important to clean up excess adhesive from the work area and application equipment before it hardens
2. Denatured alcohol and many common industrial solvents are suitable for removing uncured adhesive

Loctite Material Specification[LMS]
LMS dated March 23, 2015 (Part A) and LMS dated January 11, 2011 (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 Representive.

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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