chanhvinh.com

LOCTITE

Technical Data Sheet

LOCTITE® AA H8600™

Known as LOCTITE® H8600™
May 2015

PRODUCT DESCRIPTION

LOCTITE® AA H8600™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Methacrylate base
Appearance, Resin (Component A)	white
Appearance, Hardener (Component B)	blue
Appearance (Mixture)	Blue viscous liquid[LMS]
Viscosity	Medium, thixotropic
Components	Two component - requires mixing
Mixing Ratio, by weight Component A: Component B	100 : 50
Mix Ratio, by volume - Part A: Part B	2 : 1
Cure	Room temperature cure
Application	Bonding
Specific Benefit	• Non sagging • Excellent impact and peel strength • Little or no surface preparation • Offers tolerance to off-ratio mixing • 100% reactive • Excellent environmental resistance

LOCTITE® AA H8600™ is designed for structural galvanized steel bonding. LOCTITE® AA H8600™ is a two component adhesive system which cures rapidly when mixed at room temperature. This toughened high peel strength product was designed for use at ambient temperature, while maintaining strength at high temperatures as well (e.g. 120 °C). LOCTITE® AA H8600™ can be applied horizontally or vertically to required surfaces. Typical applications include light gauge steel walls, flooring, headers, studs, hold downs, trusses, and other light gauge steel applications where long term durability bonding galvanized steel is required. This adhesive contains 0.13 mm (5 mil) glass beads to insure adequate bondline control.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A:

Viscosity, Brookfield - HBT, 25 °C, mPa·s (cP):

Spindle 5, speed 10 rpm	60,000 to 110,000

Part B:

Viscosity, Brookfield - HBT, 25 °C, mPa·s (cP):

Spindle 4, speed 5 rpm	70,000 to 120,000

TYPICAL CURING PERFORMANCE

Fixture Time

Fixture time is defined as the time to develop a shear strength of 0.1 N/mm² .

Fixture Time, ISO 4587, minutes:

Galvanized Steel @ 8 °C	250
Galvanized Steel @ 22 °C	55
Galvanized Steel @ 32 °C	30

Open Time

Open Time @ 22°C, (mixed), minutes:

20 gram mass	25

Tack Free Time

Tack Free Time is the time required to achieve a tack free surface

Tack Free Time, minutes:

@ 8 °C	170
@ 22 °C	75
@ 32 °C	40

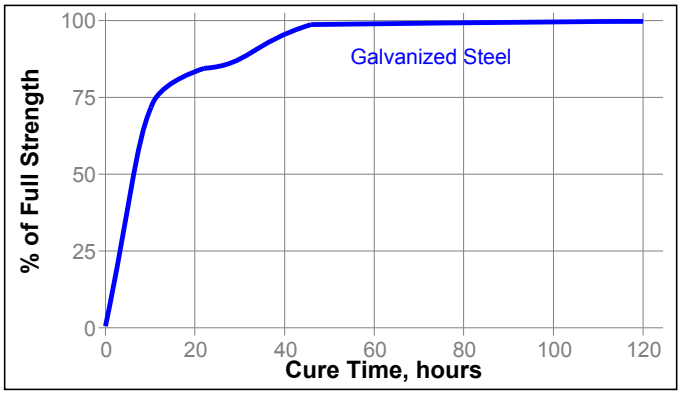
Peak Exotherm Temperature

Peak Exotherm Temperature, 20 gram mass, °C:

@ 8 °C	60
@ 22 °C	120
@ 32 °C	140

Cure Speed

The graph below shows the shear strength developed with time at 22 °C on galvanized steel lap shears and tested according to ISO 4587.



Henkel

chanhvinh.com

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured for 24 hours @ 22 °C followed by 25 minutes @ 85 °C

Lap Shear Strength, ISO 4587:

Galvanized Steel	N/mm²	≥12.4[LMS]
	(psi)	(≥1,800)

Cured for 72 hours @ 22 °C

Lap Shear Strength, ISO 4587:

Steel	N/mm²	23.1
	(psi)	(3,355)
Aluminum (etched)	N/mm²	23.2
	(psi)	(3,360)
Stainless steel	N/mm²	25.7
	(psi)	(3,720)

Cured for 5 days @ 22 °C

"T" Peel Strength, ISO 11339:

Galvanized Steel (thickness 1.6 mm)	N/mm	6.2
	(lb/in)	(35)

Impact Strength, ISO 9653, kJ/m² :

Galvanized Steel	13.1

TYPICAL ENVIRONMENTAL RESISTANCE

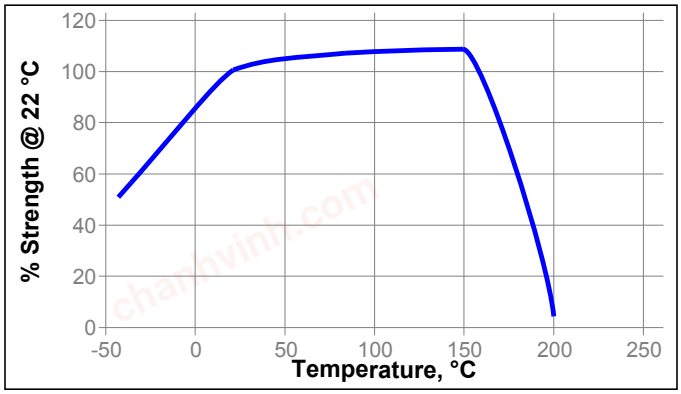
Cured for 5 days @ 22 °C

Lap Shear Strength, ISO 4587:

Galvanized Steel

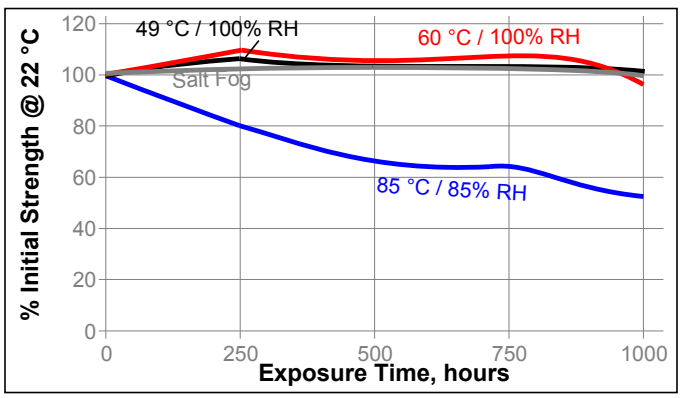
Hot Strength

Tested at temperature



Environmental Aging

Aged at temperature / humidity / condition indicated and tested @ 22 °C



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 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 H8600™ 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. Galvanized steel surface should be free from excessive oxidation (white flake). If oxidation is present, removal is required.
2. Extensive surface preparation is not required for LOCTITE® AA H8600™, 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. Cure speeds may vary based on adhesive and substrate temperatures. Reference the peak exotherm and tack free times to better understand curing time trends.
2. After the fixture time is achieved the material usually has reached handling strength. For heavy parts handling strength can take longer.
3. Parts should be fixed for a minimum period of 24 hours prior to applying a load.

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 October 13, 2005 (Part A) and LMS dated October 13, 2005 (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.

chanhvinh.com

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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

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. 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1.2