Technical data sheet

Product:	3038
Manufacturer:	HENKEL KGAA
Product group:	KLEBSTOFF
Article group:	2-K KLEBSTOFF
Download:	02.05.2024

LOCTITE® AA 3038™

This data sheet was provided to you by Tewipack Uhl GmbH. The company tewipack Uhl GmbH assumes no responsibility for the topicality and the Accuracy of the information contained. The properties of the products can vary due to various influences such as composition and condition of the Substrate, impurities in or on the substrate, temperature and humidity at the Change storage and environmental conditions during use. Using this product in combination with other material, the customer is responsible for to check through our own tests whether the product is suitable for the planned combination and whether this combination delivers the expected results

Tewipack Uhl GmbH
Industriestraße 15
D-75382 Althengstett

Telephone:
+49(0)7051/9297-0
Fax:
+49(0)7051/9297-99

E-Mail:
info@tewipack.de
Website:
www.tewipack.de

Managing director:
Alexander Uhl,
Michael Uhl
HRB 330424
Amtsgericht
Stuttgart

Bank details:
Sparkasse
Pforzheim
Calw
BLZ 666 500
85
Konto 17 787

Commerzbank
Sindelfingen
BLZ 603 400 71
Konto 8 001 166

Vereinigte
Volksbank AG
Böblingen
BLZ 603 900 00
Konto 80 089
003

Postbank
Stuttgart
BLZ 600 100
70
Konto 146
294 708

Technical Data Sheet

LOCTITE® AA 3038™

Known as LOCTITE® 3038™
December 2013

PRODUCT DESCRIPTION

LOCTITE® AA 3038™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Acrylic
Appearance, Resin (Component A)	Clear yellow gel[LMS]
Appearance, Hardener (Component B)	Viscous straw colored liquid[LMS]
Components	Two component - requires mixing
Viscosity	Medium, thixotropic
Cure	Two part acrylic
Mix Ratio, by volume - Part A: Part B	1 : 10
Application	Bonding
Specific Benefit	Bonds low energy plastic without pre-treatment

LOCTITE® AA 3038™ is designed primarily to bond e-coated metals (ECS) to glass fibre filled polypropylenes (PPGF) but can also be used on other low energy substrates such as LDPE and HDPE. The product is designed to work without surface pre-treatment. The product contains 0.25 mm fillers for bondline thickness control. The thixotropic nature of LOCTITE® AA 3038™ reduces the migration of liquid product after application to the substrate.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A:

Specific Gravity @ 20 °C	1.2
Viscosity, Cone & Plate, mPa·s (cP):	
Temperature: 25 °C, Shear Rate: 20 s^{-1}	1,500 to 15,000[LMS]
Color, APHA	1 to 3[LMS]
Flash Point - See SDS	

Part B:

Specific Gravity @ 25 °C	1.0
Viscosity, Cone & Plate, mPa·s (cP):	
Temperature: 25 °C, Shear Rate: 20 s^{-1}	6,000 to 18,000[LMS]
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

This product cures when the components are dispensed through a static mixer at room temperature.

Fixture Time

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

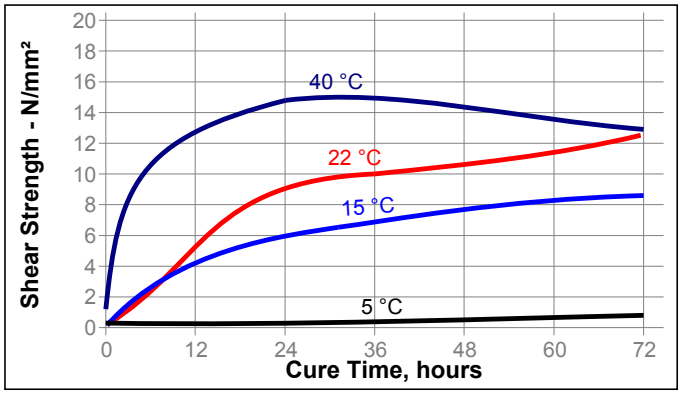
Fixture Time, mixed, minutes:	
PPGF to ECS	≤70

Open Time

Open Time, mixed, minutes	4

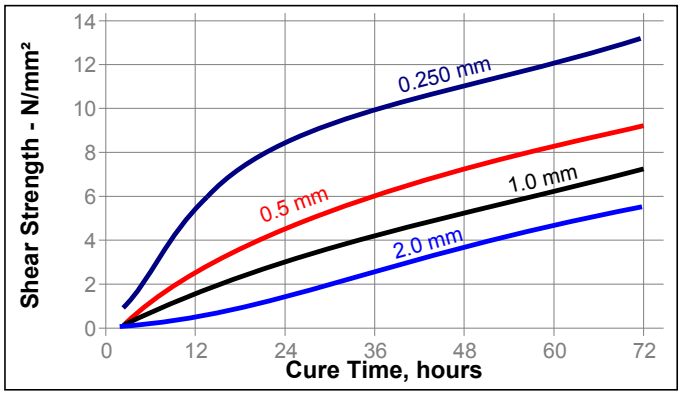
Cure Speed vs. Temperature

The graph below shows the shear strength developed with time on ECS to PPGF at different temperatures and tested according to ISO 4587.



Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. Thin bond lines result in higher cure speeds, increasing the bond gap will decrease the rate of cure.



TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 24 hours @ 22 °C

Physical Properties:

Coefficient of Thermal Expansion, K^{-1}:		
Below Tg		178×10^{-6}
Above Tg		145×10^{-6}
Glass Transition Temperature, °C		57
Coefficient of Thermal Conductivity, W/(m·K)		0.436
Shore Hardness, ISO 868, Durometer D		65

Cured for 168 hours @ 22 °C

Physical Properties:

Elongation, at break, ISO 527-2, %		37
Tensile Strength, at break, ISO 527-2	N/mm² (psi)	12.98 (1,880)
Tensile Modulus, ISO 527-2	N/mm² (psi)	704 (102,080)

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured for 72 hours @ 22 °C

Lap Shear Strength, ISO 4587:

PPGF to ECS	N/mm² (psi)	≥8[LMS] (≥1,160)
PPGF to Polycarbonate	N/mm² (psi)	5.5 (800)
Aluminum	N/mm² (psi)	7.9 (1,150)
PPGF	N/mm² (psi)	9.8 (1,420)
Polyamide (Nylon)	N/mm² (psi)	2.9 (420)
Polybutylene Terephthalate (PBT)	N/mm² (psi)	13.6 (1,970)

Cured for 24 hours @ 22 °C

Lap Shear Strength, ISO 4587:

PPGF to ECS	N/mm² (psi)	8.4 (1,220)

Cured for 168 hours @ 22 °C

Lap Shear Strength, ISO 4587:

PPGF to ECS	N/mm² (psi)	10.5 (1,520)

TYPICAL ENVIRONMENTAL RESISTANCE

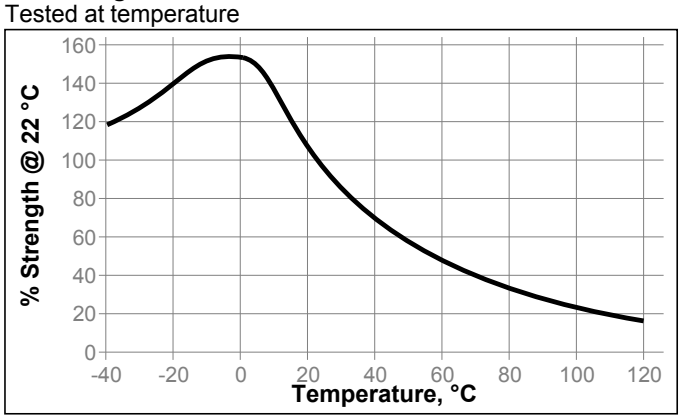
Cured for 24 hours @ 22 °C

Lap Shear Strength, ISO 4587:

PPGF to ECS

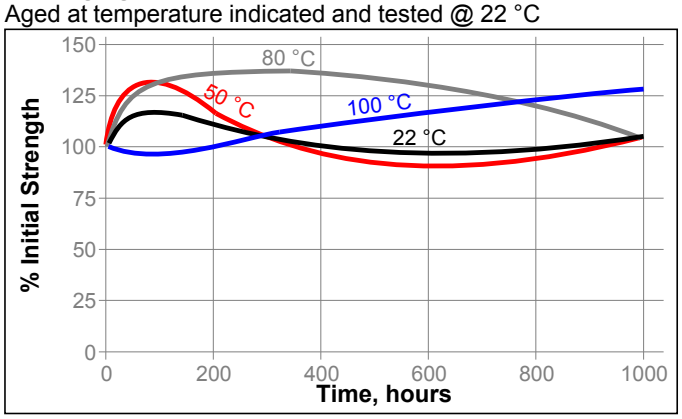
Hot Strength

Tested at temperature



Heat Aging

Aged at temperature indicated and tested @ 22 °C



Chemical/Solvent Resistance

Aged under conditions indicated and tested @ 22°C.

		% of initial strength		
Environment	**°C**	**100 h**	**500 h**	**1000 h**
98% RH	40	112	103	94
Motor oil	22	106	110	107
Motor oil	50	132	96	111
Water/glycol	22	114	102	99
Water/glycol	50	109	102	91

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:

1. For best performance bond surfaces should be clean and free from grease.
2. For more detailed information, please contact your local Technical Service Center or Customer Service Representative.

Loctite Material Specification[LMS]

LMS dated September 18, 2006 (Part A) and LMS dated September 26, 2007 (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

Store product in the unopened container in a dry location. Material removed from containers may be contaminated during use. Do not return liquid to original container. 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**. Henkel cannot assume responsibility for product which has been contaminated or stored under conditions other than those recommended. 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

Reference 0.5