

LOCTITE[®] AA 4L38™

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PRODUCT DESCRIPTION

LOCTITE[®] AA 4L38™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Acrylated urethane
Appearance (uncured)	Clear, Transparent to slightly yellow
Fluorescence	Positive under UV light
Cure	Ultraviolet (UV) / Visible light
Cure Benefit	Production - high speed curing
Application	Rigid Bonding
Specific Benefit	<ul style="list-style-type: none"> • Low viscosity • Plastic bonding • High humidity resistance

LOCTITE[®] AA 4L38™ is a low viscosity light cure adhesive designed for applications where a fast curing, highly flexible adhesive is required. It is an optimal choice when bonding various metals and plastics. Suitable for use in the assembly of **disposable medical devices**.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C 1.05

Viscosity, Haake Cone & Plate, 25 °C, mPa·s (cP):
M10, C3 48 to 55

Flash Point - See SDS

TYPICAL CURING PERFORMANCE

Fixture Time

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

UV Fixture Time, Glass microscope slides, seconds:

UV Lamp300-500nm:
35 mW/cm² ≤10

Depth of Cure

Below shows the depth of cure as measured from the thickness (mm) of the cured product when exposed to light for 10 seconds

Depth of Cure, mm:

UV Lamp300-500nm:
35 mW/cm² ≥2

TYPICAL PROPERTIES OF CURED MATERIAL

Cured @ 35 mW/cm², measured @ 300-500 nm for 10 seconds

Physical Properties:

Elongation at break% 9.5
Tensile Strength, ISO 527-3 N/mm² 20
(psi) (2,900)

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured @ 35 mW/cm², measured @ 300-500 nm for 10 seconds

Shear Strength

Lap Shear Strength, ISO 4587:

PC to PC * N/mm² 5.7
* (psi) (830)
Acrylic to PC * N/mm² 4.2
* (psi) (610)

*Substrates failed prior to the bond joint

TYPICAL ENVIRONMENTAL RESISTANCE

Cured @ 35 mW/cm², measured @ 300-500 nm for 10 seconds

Hot Strength

Lap shear strength, tested at temperature:

Temperature (°C)	% of Initial Strength
23	100
80	65
120	50

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. This product is light sensitive; exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling.
2. The product should be dispensed from applicators with black feedlines.
3. For best performance bond surfaces should be clean and free from grease.
4. Cure rate is dependent on lamp intensity, distance from light source, depth of cure needed or bondline gap and light transmittance of the substrate through which the radiation must pass.
5. Cooling should be provided for temperature sensitive substrates such as thermoplastics.
6. Plastic grades should be checked for risk of stress cracking when exposed to liquid adhesive.
7. Excess uncured adhesive can be wiped away with organic solvent (e.g. Acetone).
8. Bonds should be allowed to cool before subjecting to any service loads.

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.

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.

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

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