Technical Data Sheet

LOCTITE® AA 3081™

Known as LOCTITE® 3081™
October 2014

PRODUCT DESCRIPTION

LOCTITE® AA 3081™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Modified acrylate
Appearance (uncured)	Transparent liquid[LMS]
Fluorescence	Positive under UV light[LMS]
Components	One component - requires no mixing
Viscosity	Low
Cure	Ultraviolet (UV) light
Cure Benefit	Production - high speed curing
Application	Bonding

LOCTITE® AA 3081™ is designed for bonding cannulae into hubs, syringes and lancets. LOCTITE® AA 3081™ has excellent adhesion to glass, metal and certain thermoplastic substrates. The ability of this product to flouresce under black light facilitates inspection of bonded assemblies for adhesive. The low viscosity of this product makes it ideal for applications where wicking of the adhesive into pre-assembled parts is desired. Suitable for use in the assembly of **disposable medical devices**.

ISO-10993

An ISO 10993 Test Protocol is an integral part of the Quality Program for LOCTITE® AA 3081™. LOCTITE® AA 3081™ has been qualified to Henkel's ISO 10993 Protocol as a means to assist in the selection of products for use in the medical device industry. Certificates of Compliance are available on Henkel's website or through the Henkel Quality Department.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.01
Flash Point - See SDS	
Infrared Spectroscopy	To match standard[LMS]
Viscosity, Cannon Fenske, ISO 3104, mPa·s (cP)	70 to 140[LMS]

TYPICAL CURING PERFORMANCE

LOCTITE® AA 3081™ is recommended to be cured with a high intensity UV source, such as a medium pressure mercury arc lamp or an Electrodeless system, capable of generating an irradiance of 100 mW/cm² @ 365nm at the bondline. Cure rate and ultimate depth of cure depend on light intensity, spectral distribution of the light source, exposure time and light transmittance of the substrate through which the light must pass

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:

30 mW/cm² , measured @ 365 nm	≤5[LMS]

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Refractive Index		1.5
Shore Hardness, ISO 868, Durometer D		74
Elongation, at yield, ISO 527-3, %		3.3
Elongation, at break, ISO 527-3, %		7.6
Tensile Strength, at yield, ISO 527-3	N/mm²	32.4
	(psi)	(4,700)
Tensile Strength, at break, ISO 527-3	N/mm²	22.1
	(psi)	(3,200)
Tensile Modulus, ISO 527-3	N/mm²	1,875
	(psi)	(272,000)

TYPICAL ENVIRONMENTAL RESISTANCE

Effects of Sterilization

In general, products similiar in composition to LOCTITE® AA 3081™ subjected to standard sterilization methods, such as EtO and Gamma Radiation (25 to 50 kiloGrays cumulative) show excellent bond strength retention. LOCTITE® AA 3081™ maintains bond strength after 1 cycle of steam autoclave. It is recommended that customers test specific parts after subjecting them to the preferred sterilization method. Consult with Loctite® for a product recommendation if your device will see more than 3 sterilization cycles.

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. Recommended intensity for cure in bondline situation is 5 mW/cm² minimum (measured at the bondline) with an exposure time of 4-5 times the fixture time at the same intensity.
6. For dry curing of exposed surfaces, higher intensity UV is required (100 mW/cm²).
7. Cooling should be provided for temperature sensitive substrates such as thermoplastics.
8. Plastic grades should be checked for risk of stress cracking when exposed to liquid adhesive.
9. Excess uncured adhesive can be wiped away with organic solvent (e.g. Acetone).
10. Bonds should be allowed to cool before subjecting to any service loads.

Loctite Material Specification[LMS]
LMS dated July 30, 2004. 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 Quality.

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.

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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