



LOCTITE® WT 3001

August 2025

Product description

LOCTITE® WT 3001 provides the following product characteristics:

Technology	Acrylic
Chemical type	Acrylated urethane
Appearance (uncured)	Transparent, light-yellow, liquid
Fluorescence	Red under UV light
Cure	Ultraviolet (UV) / visible light
Cure benefit	Production - high speed curing
Application	Flexible bonding
Specific benefits	- Fast LED 405nm curing - Jettable - IBOA free - High humidity resistance

LOCTITE® WT 3001 is an IBOA free, low viscosity light cure adhesive designed for wearable medical device applications. It provides adhesion to rigid substrates such as polycarbonate, ABS, PVC and FR4. The low viscosity formula enables good jetting capability and suitable for typical dispensing techniques. Suitable for use in the assembly of **disposable medical devices**.

ISO-10993

LOCTITE® WT 3001 has been tested to Henkel's test protocols based on ISO 10993 biocompatibility standards, as a means to assist in the selection of products for use in the medical device industry.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific gravity @ 25°C	~1.1
Viscosity, Physica Cone & Plate, @ 25°C, mPa.s (cP)	
Shear rate 20s ⁻¹	200

Stress cracking

Liquid adhesive is applied to a medical grade polycarbonate bar 2.54 cm by 10.16 cm by 3.175 mm which is then flexed to induce a known stress level.

Stress cracking, ASTM D 3929, minutes:	
6.9 N/mm ² (1,000 psi) stress	>15
13.8 N/mm ² (2,000 psi) stress	> 5 < 10
20.7 N/mm ² (3,000 psi) stress	> 1 < 5

TYPICAL CURING PERFORMANCE

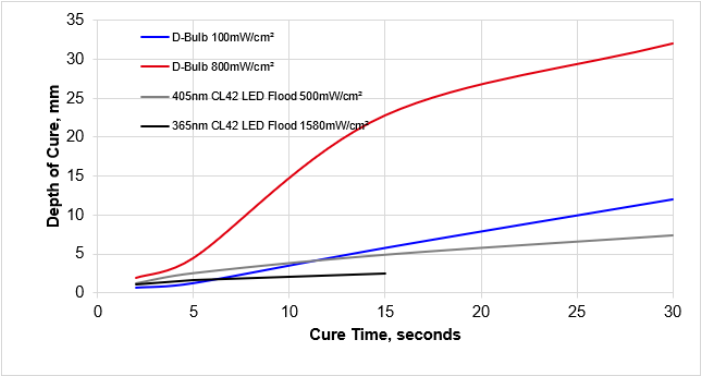
Fixture time

Fixture time is defined as the time to develop a shear strength of 0.1 N/mm² (14.5 psi).

UV Fixture time, Glass microscope slides, seconds:	
405nm CL42 LED Flood @ 30mW/cm ²	≤ 5

Depth of cure

The graph below shows the increase in depth of cure with time at various light intensities as measured from the thickness of the cured product formed.



TYPICAL PROPERTIES OF CURED MATERIAL

Cured @ 1 W/cm², measured @ 405 nm, for 60 seconds using a LOCTITE® CL42 LED Flood, 405nm.

Physical properties

Linear shrinkage, ASTM D 792, %		3.2
Shore Hardness, ISO 868, Durometer D		76
Elongation at break, ISO 527-3, %		18
Tensile modulus, ISO 527-3	N/mm ² (psi)	1,470 (212,600)
Tensile strength at break, ISO 527-3	N/mm ² (psi)	41 (5,940)
Water absorption, ISO 62, %:		
2 hours in water @ 100°C		8.1
Re-Dry weight, soluble matter lost		0.7
Glass transition temperature, ASTM D5418, °C		63
Glass transition temperature, ISO 11359-2, °C		48
Coefficient of thermal expansion, ISO 11359-2		
Pre Tg		88x10 ⁻⁶
Post Tg		202x10 ⁻⁶
Refractive index, ASTM D542		1.5

Electrical properties

Dielectric strength, ASTM-D149-97a, kV/mm	10.4
---	------



TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive properties

Cured @ 1 W/cm², measured @ 405nm, for 10 seconds using a LOCTITE® CL42 LED Flood, 405nm.

Block shear strength, ISO 13445

Acrylic	N/mm ² (psi)	1.7 (240)
Polypropylene (plasma treated)	N/mm ² (psi)	1.5 (220)
HDPE (plasma treated)	N/mm ² (psi)	3.4 (490)
Polycarbonate (PC)	N/mm ² (psi)	23.2 (3,360)

Lap shear strength, ISO 4587

PC to plasticized PVC	N/mm ² (psi)	1.9 (270)
PC to plasticized PVC (heat aged *)	N/mm ² (psi)	1.9 (270)
PC to TPU**	N/mm ² (psi)	2.1 (310)
PC to stainless steel	N/mm ² (psi)	2.8 (410)
PC to FR4	N/mm ² (psi)	7.6 (1,100)
Glass**	N/mm ² (psi)	2.5 (360)

*Aged for 12 days at 65°C to test for plasticizer leaching effects

**Substrate failure

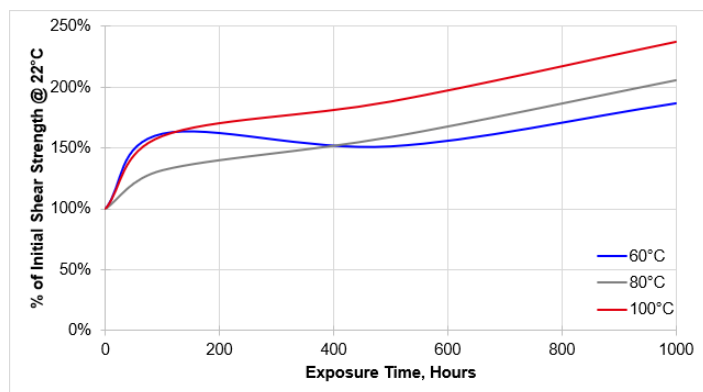
TYPICAL ENVIRONMENTAL RESISTANCE

Heat aging

Cured @ 1 W/cm², measured @ 405nm, for 10 seconds using a LOCTITE® CL42 LED Flood, 405nm.

PC to PC Block shear strength, ISO 13445

Aged at temperature indicated and tested @ 22 °C.



Chemical/solvent resistance

Cured @ 1 W/cm², measured @ 405nm, for 10 seconds using a LOCTITE® CL42 LED Flood, 405nm.

PC to PC Block shear strength, ISO 13445

Environment	°C	hours	% of initial strength
Dilute bleach (40:1)	22	2	115
Dilute bleach (40:1)	22	24	94
Water	100	2	96
Isopropanol	22	24	104
Humidity 95%RH	40	168	75
Sebum	24	72	45
Sebum	24	168	50
Sebum	24	336	44
Sun lotion	24	72	90
Sun lotion	24	168	62
Sun lotion	24	336	57

Sterilization resistance

Cured @ 1 W/cm², measured @ 405nm, for 10 seconds using a LOCTITE® CL42 LED Flood, 405nm.

PC to PC Block shear strength, ISO 13445

Treatment	% of initial strength
Ethylene Oxide, 1 cycle	119
Ethylene Oxide, 2 cycles	95
Gamma, >50 Kilo gray	171
Autoclave, 1 cycle	9
Autoclave, 5 cycle	0

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 application 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 transmission 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 adhesive can be wiped away with organic solvent.
8. Bonds should be allowed to cool before subjecting to any service loads.



Storage

The product is classified as flammable and must be stored in an appropriate storage area in compliance with relevant regulations. Do not store near oxidizing agents or combustible materials. Store product in the unopened container in a dry and well air ventilation location. Storage information may also be indicated on the product container labelling.

Optimal storage: 8 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 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 Henkel representative.

Product specification

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

Approval and certificate

Please contact Henkel representative for related approval or certificate of this product

Data ranges

The data contained herein may be reported as a typical value. Values are based on actual test data and are verified on a periodic basis.

Temperature/Humidity Ranges: 23°C / 50% RH = 23±2°C / 50±5% RH

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\mu\text{m} / 25.4 = \text{mil}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Disclaimer

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, 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