LOCTITE® 3526™

November 2004

PRODUCT DESCRIPTION

LOCTITE® 3526™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Modified acrylic
Appearance (uncured)	Transparent, pale straw to amber liquid[LMS]
Fluorescence	Positive under UV light[LMS]
Components	One component - requires no mixing
Viscosity	Medium
Cure	Ultraviolet (UV)/ visible light
Secondary Cure	Heat
Cure Benefit	Production - high speed curing
Application	Bonding

LOCTITE® 3526™ cures rapidly to form flexible, transparent bonds when exposed to ultraviolet light and/or visible light of sufficient irradiance and has shown excellent adhesion to a wide variety of substrates including glass, many plastics and most metals. The secondary cure system permits cure of product in shadowed areas.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.06
Refractive Index, ASTM D542	1.49
Flash Point - See MSDS	
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):	
Spindle 6, speed 20 rpm	11,000 to 24,000[LMS]

TYPICAL CURING PERFORMANCE

LOCTITE® 3526™ can be cured by exposure to UV and/or visible light radiation or heat . The speed and depth of cure will depend on the UV intensity measured at the product surface.

Heat Cure

This product may be cured with heat. The bond area should be heated to 121°C and maintained at that temperature for 15 minutes.

Fixture Time

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

UV Fixture Time, ISO 4587, Glass microscope slides, seconds:

Black light, Zeta® 7500 light source:	
6 mW/cm² @ 365 nm	≤5[LMS]

Tack Free Time

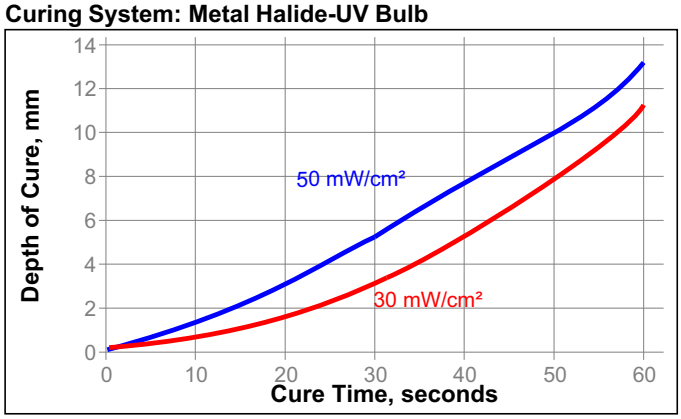
Tack Free Time is the time required to achieve a tack free surface.

Tack Free Time, seconds:	
Metal halide, UV bulb:	
30 mW/cm² @ 365 nm	≤60
50 mW/cm² @ 365 nm	≤45
Metal halide, V bulb:	
30 mW/cm² @ 365 nm	≤150
50 mW/cm² @ 365 nm	≤60
Hg Arc light source:	
50 mW/cm² @ 365 nm	≤10
100 mW/cm² @ 365 nm	≤5
Fusion® D light source:	
50 mW/cm² @ 365 nm	≤20
100 mW/cm² @ 365 nm	≤10
Fusion® V light source:	
50 mW/cm² @ 365 nm	≤20
100 mW/cm² @ 365 nm	≤10

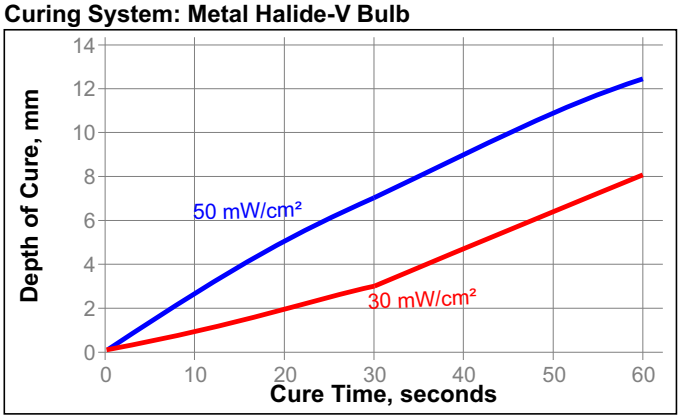
Depth of Cure

The following graphs show the effect of light source, light intensity and exposure time on depth of cure for LOCTITE® 3526™

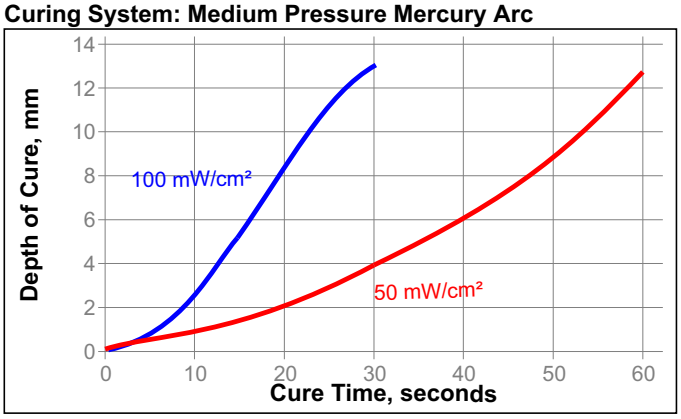
Curing System: Metal Halide-UV Bulb



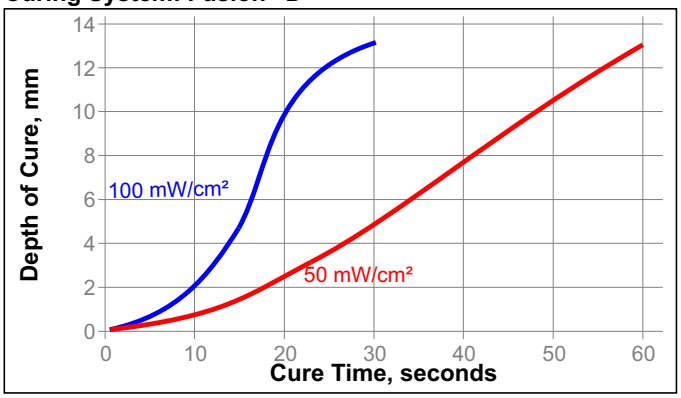
Curing System: Metal Halide-V Bulb



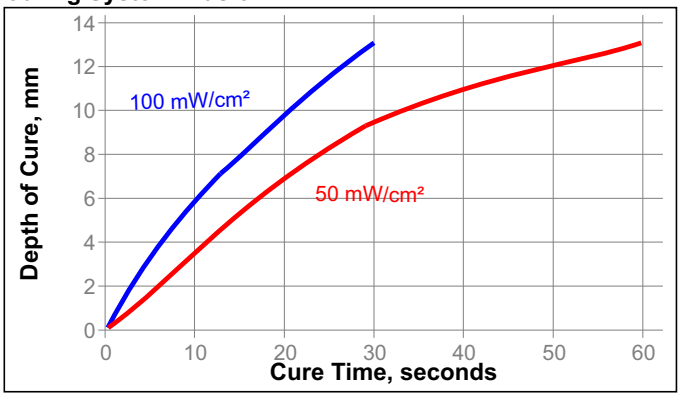
Curing System: Medium Pressure Mercury Arc



Curing System: Fusion® D



Curing System: Fusion® V



TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Coefficient of Thermal Expansion, ASTM E 831, K^{-1}		418×10^{-6}
Glass Transition Temperature, ASTM E 228, °C:		
(Tg) by TMA		36
Refractive Index		1.51
Water Absorption, ISO 62, %		5.6
Shore Hardness, ISO 868, Durometer D		62
Elongation, at break, ISO 527, %		185
Tensile Modulus, ISO 527	N/mm²	290
	(psi)	(42,000)
Tensile Strength, at break, ISO 527	N/mm²	23
	(psi)	(3,330)

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured @ 30 mW/cm² @ 365 nm for 15 seconds using a Zeta® 7400 light source

Torsional Shear Strength, ASTM D 3658:

Aluminum hex button to Glass	N·m	≥70[LMS]
	(lb·ft)	(≥51.6)

Cured @ 30 mW/cm² @ 365 nm for 30 seconds using a UV metal halide bulb

Block Shear Strength, ISO 13445:

Steel to Glass	N/mm²	10.6
	(psi)	(1,530)
Aluminum to Glass	N/mm²	9.1
	(psi)	(1,320)
Polycarbonate to Glass	N/mm²	4.1
	(psi)	(600)
PVC to Glass	N/mm²	5.1
	(psi)	(730)
ABS to Glass	N/mm²	1.5
	(psi)	(220)
G-10 Epoxyglass to Glass	N/mm²	6.7
	(psi)	(980)

Cured for 15 minutes @ 121 °C

Block Shear Strength, ISO 13445:

Steel to Glass	N/mm²	15.8
	(psi)	(2,300)
Aluminum to Glass	N/mm²	12.8
	(psi)	(1,860)

Lap Shear Strength, ISO 4587:

Steel	N/mm²	18.8
	(psi)	(2,720)
Aluminum	N/mm²	17.6
	(psi)	(2,550)

TYPICAL ENVIRONMENTAL RESISTANCE

Cured @ 30 mW/cm² @ 365 nm for 30 seconds using a UV metal halide bulb

Block Shear Strength, ISO 13445:

Steel to Glass

Chemical/Solvent Resistance
Aged under conditions indicated and tested @ 22 °C.

		% of initial strength	
Environment	**°C**	**300 h**	**500 h**
Air	121	85	85
Air	150	40	45
Motor oil (10W-30)	22	85	95
Unleaded gasoline	22	110	90
Condensing Humidity	50	80	25

		% of initial strength		
Environment	**°C**	**2 h**	**24 h**	**170 h**
Isopropanol	22	------	80	------
Boiling water	100	110	------	------
Water	49	------	------	90

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 Material Safety Data Sheet (MSDS).

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. Full cure is estimated to be four to five times the fixture time.
6. For dry curing of exposed surfaces, mercury arc (Zeta® 7200 light source) or Fusion® D or H bulbs are recommended.
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 December 6, 2000. 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
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
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Trademark usage

Reference 1

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

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Other Similar products are found below :

37684 MM01939 2257357 2139180 LOC-MIKSER2 406 603, 10ML 403, 50G 2701, 50ML 542, 250ML 572, 50ML 3526 8106, 1L 2700, 50ML 5800, 50ML MM01057 1188112 386862 LOC-5615/400ML 97262 983438 648, 50ML 40945 MM01056 98472 984569 5400, 50ML 5990, 40ML SUPERLUBE OIL, 375ML 290 GC 10 TYPE 3 (JAR) 660, 50ML SUPER GLUE GLASS, 3G LOC-MIKSER 6300, 50ML 2023641 LT 5075 GC 10 TYPE 4 (JAR) 495, 50G 243, 250ML LOC-638-10 98455 496, 50G 2472659 5660, 40ML 4080, 50G 55, 160M 5145 5368, 310ML 518, 65ML