



# Product 350

August 2003

## PRODUCT DESCRIPTION

LOCTITE® Adhesive/Sealant 350 provides the following product characteristics:

<b>Technology</b>	Acrylic
<b>Chemical Type</b>	Modified acrylic
<b>Appearance (uncured)</b>	Transparent dark amber liquid <sup>LMS</sup>
<b>Components</b>	One component - requires no mixing
<b>Viscosity</b>	Medium
<b>Cure</b>	Ultraviolet (UV) Light
<b>Application</b>	Bonding, Encapsulating or Sealing
<b>Operating Temperature</b>	-54°C to +150°C

Product 350 is a medium viscosity adhesive that forms tough, flexible bonds with excellent adhesion to glass, metal and certain thermoplastic substrates. Strength retention is excellent when exposed to water or humidity. The product has a long open working time, making it applicable for screen printing operations.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25°C	1.01
Flash Point (TCC), °C	>93
Viscosity @ 25°C, mPa·s:	
Brookfield RVT:	
Spindle 5 @ 20 rpm	3,500 to 6,000 <sup>LMS</sup>

## TYPICAL CURING PERFORMANCE

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

UV Fixture Time vs source intensity

UV Fixture Time, seconds:

UV Light Source Intensities:

6 mW/cm <sup>2</sup> @ 365 nm	15
12 mW/cm <sup>2</sup> @ 365 nm	10
100 mW/cm <sup>2</sup> @ 365 nm	5

UV Fixture Time on glass microscope slides, 0 gap

UV Fixture Time, seconds:

UV Light Source Intensities:

6 mW/cm <sup>2</sup> @ 365 nm	≤20 <sup>LMS</sup>
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### Full Cure Time (approximate)

UV Cure Time vs source intensity

UV Light Source Intensities:

6 mW/cm <sup>2</sup> @ 365 nm	90
12 mW/cm <sup>2</sup> @ 365 nm	60
100 mW/cm <sup>2</sup> @ 365 nm	30

### Note:

Surface can be cured tack free with 60 mW/cm<sup>2</sup> or greater intensity

## PERFORMANCE OF CURED MATERIAL

### Adhesive Properties:

Shear Strength, ASTM D 1151, N/mm<sup>2</sup> :

ABS to glass:	
RT control	4.97
Aged for 30 days in 95% RH at 35°C	4.48
PVC to glass:	
RT control	5.34
Aged for 30 days in 95% RH at 35°C	4.97
Polycarbonate to glass:	
RT control	5.38
Aged for 30 days in 95% RH at 35°C	5.10
Polystyrene to glass:	
RT control	1.38
Aged for 30 days in 95% RH at 35°C	1.52
Acrylic to glass:	
RT control	5.07
Aged for 30 days in 95% RH at 35°C	2.48
Polyester glass to glass:	
RT control	5.28
Aged for 30 days in 95% RH at 35°C	4.28
Epoxyglass to glass:	
RT control	4.83
Aged for 30 days in 95% RH at 35°C	4.32

Cured @ 6 mW/cm<sup>2</sup> @ 365nm for 3 minutes.

### Adhesive Properties:

Torsional Shear Strength, N.m:

Aluminum Hex Button to Glass:

≥61.00<sup>LMS</sup>

## 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).**

Where aqueous washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive. In some cases these aqueous washes can affect the cure and performance of the adhesive.

This product is not normally recommended for the use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). Users are recommended to confirm compatibility of the product with such substrates.

### Directions for use

For best strength and aging properties, bonding surfaces should be clean and dry. When cured under low intensity light, excess adhesive will remain uncured and can be removed with a chlorinated solvent wipe.

Coverage:

@ 0.127mm bondline - 78.7cm<sup>2</sup> /ml

@ 0.254mm bondline - 39.4cm<sup>2</sup> /ml

**Loctite Material Specification<sup>LMS</sup>**

LMS dated June 1, 1999. 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. Storage information may be indicated on the product container labeling.

**Products shall be maintained at temperatures between 8°C to 28°C unless otherwise labeled, or, specified. Storage, at temperatures below 8°C, or, greater than 28°C, is not recommended. Temperatures below 8°C and above 28°C can adversely affect product properties**

Material removed from containers may be contaminated during use. Do not return product to the original container. Loctite 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**

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$   
 $\text{kV/mm} \times 25.4 = \text{V/mil}$   
 $\text{mm} \times 0.039 = \text{inches}$   
 $\text{mPas} = \text{cP}$   
 $\text{N/mm}^2 \times 145 = \text{psi}$   
 $\text{N} \times 0.225 = \text{lbs}$

**Note**

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 Loctite 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 Loctite Corporation's products. Henkel Loctite 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 Loctite 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.

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Reference 0.0