

## LOCTITE® 6001™

December 2008

### PRODUCT DESCRIPTION

LOCTITE® 6001™ provides the following product characteristics:

<b>Technology</b>	Acrylic
<b>Chemical Type</b>	Methacrylate ester
<b>Appearance (uncured)</b>	Rose beige to off-white thixotropic liquid <sup>LMS</sup>
<b>Fluorescence</b>	Positive under UV light <sup>LMS</sup>
<b>Components</b>	One component - requires no mixing
<b>Viscosity</b>	Medium, thixotropic
<b>Cure</b>	Anaerobic
<b>Secondary Cure</b>	Activator
<b>Application</b>	Retaining
<b>Strength</b>	Medium to High

LOCTITE® 6001™ is designed for the bonding of cylindrical fitting parts. The product cures when confined in the absence of air between close fitting metal surfaces and prevents loosening and leakage from shock and vibration. This product develops adhesion even between close fitting surfaces of metal with some plastics. Typical applications include rotor to shafts in fractional and subfractional horsepower motors. Locks bushings and sleeves in housings on shafts. Augments press fits. The thixotropic nature of LOCTITE® 6001™ reduces the migration of liquid product after application to the substrate.

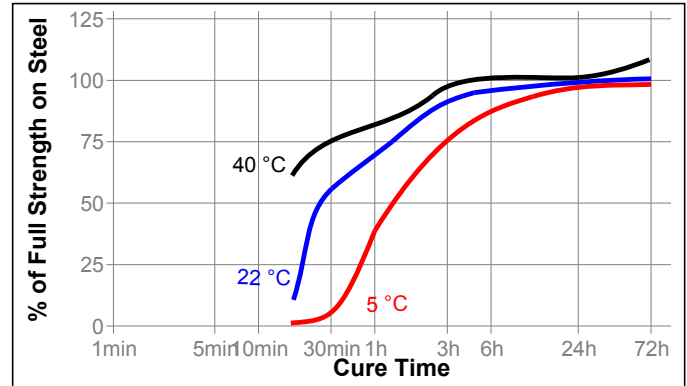
### TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.1
Flash Point - See SDS	
Viscosity, Brookfield - RV, 25 °C, mPa·s (cP):	
Spindle 3, speed 2 rpm, Helipath	6,000 to 14,000
Spindle 3, speed 20 rpm, Helipath	1,000 to 5,000 <sup>LMS</sup>

### TYPICAL CURING PERFORMANCE

#### Cure Speed vs. Temperature

The rate of cure will depend on the temperature. The graph below shows the shear strength developed with time at different temperatures on steel pins and collars and tested according to ISO 10123.



### TYPICAL PERFORMANCE OF CURED MATERIAL

#### Adhesive Properties

After 1 hour @ 22 °C

Compressive Shear Strength, ISO 10123:	
Steel pins and collars (degreased)	N/mm <sup>2</sup> ≥6.9 <sup>LMS</sup> (psi) (≥1,000)

After 24 hours @ 22 °C

Compressive Shear Strength, ISO 10123:	
Steel pins and collars (degreased)	N/mm <sup>2</sup> ≥12.4 <sup>LMS</sup> (psi) (≥1,798)

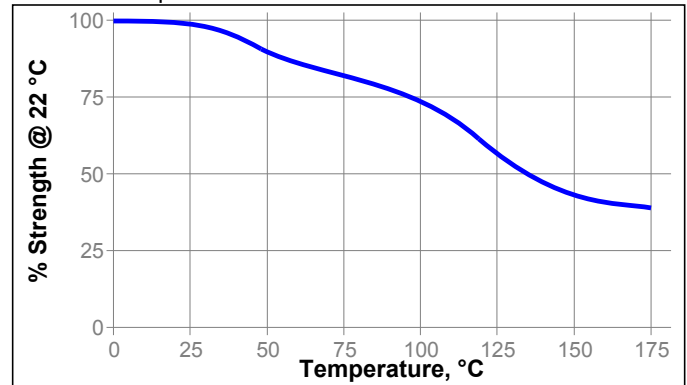
### TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 1 week @ 22 °C

Compressive Shear Strength, ISO 10123:	
Steel pins and collars	

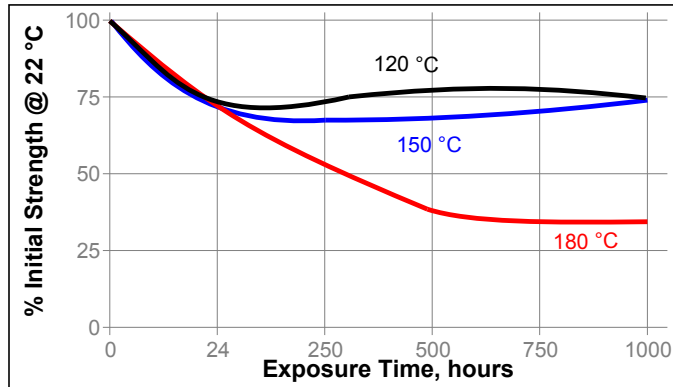
### Hot Strength

Tested at temperature



**Heat Aging**

Aged at temperature indicated and tested @ 22 °C

**Chemical/Solvent Resistance**

Aged under conditions indicated and tested @ 22 °C.

Environment	°C	% of initial strength		
		24 h	500 h	1000 h
Motor oil (MIL-L-46152)	125	60	45	45
Auto trans. fluid	87	90	80	90
Water/glycol 50/50	87	75	60	80
Brake fluid	22	95	100	100
Ethanol	22	105	105	115
Acetone	22	100	105	110

**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).

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 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 Assembly**

- For best results, clean all surfaces (external and internal) with a LOCTITE® cleaning solvent and allow to dry.
- If the material is an inactive metal or the cure speed is too slow, spray with Activator 7471™ or 7649™ and allow to dry.
- For Slip Fitted Assemblies**, apply adhesive around the leading edge of the pin and the inside of the collar and use a rotating motion during assembly to ensure good coverage.
- For Press Fitted Assemblies**, apply adhesive thoroughly to both bond surfaces and assemble at high press on rates.
- For Shrink Fitted Assemblies** the adhesive should be coated onto the pin, the collar should then be heated to create sufficient clearance for free assembly.
- Parts should not be disturbed until sufficient handling strength is achieved.

**For Disassembly**

- Apply localized heat to the assembly to approximately 250 °C. Disassemble while hot.

**For Cleanup**

- Cured product can be removed with a combination of soaking in a Loctite solvent and mechanical abrasion such as a wire brush.

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

LMS dated February 27, 2003. 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/mm<sup>2</sup> 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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Reference 1.2