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# Product Description Sheet

## Product 675

Industrial Products, September 2000

### PRODUCT DESCRIPTION

LOCTITE® Product 675 is a general purpose adhesive used primarily for joining cylindrical assemblies of all types. It is a low viscosity, self-hardening adhesive that cures when confined between ferrous or copper alloy metals. On other metals or thermoset plastics, use of Locquic Primer T or N is required. The product's temperature range is 65°F to 300°F.

### TYPICAL APPLICATIONS

- Locks bearings on shafts and in housings.
- Bonds sleeves, wear rings and bushings in place.
- Augments press fits.
- Bonds pivot pins, adapters and plugs in place.
- Seals mechanical fits that have small clearances.

### Directions for Use

For best performance, surfaces should be clean and free of grease. Ensure joint is completely filled with adhesive. For slip fitted assemblies, this is achieved by applying adhesive around the pin and threading edge of the collar and using a rotating motion during assembly to ensure good coverage. For press 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. This grade will develop temperature resistance after exposure to a heat cure of one hour at 180°C or longer times at temperatures above 120°C in service. For more detailed information on using retaining adhesives, contact your local technical service center.

### PROPERTIES OF UNCURED MATERIAL

	Value
Chemical Type	Dimethacrylate ester
Appearance	Green
Viscosity @ 25°C, mPa.s (cP)	100 to 150
Brookfield RVT Spindle #1 @ 50 RPM	
Flash Point °C (TCC)	>93
Toxicity	Low

### TYPICAL PROPERTIES OF CURED MATERIAL

#### Physical Properties

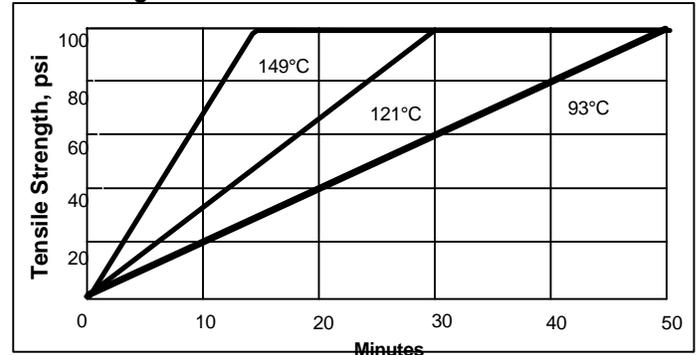
Coefficient of Thermal Expansion, ASTM D 696, K <sup>-1</sup>	55 - 100 x 10 <sup>-6</sup>
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### PERFORMANCE OF CURED MATERIAL

(After 24 hours at 22°C on steel)

	Value	Typical Range
Shear Strength, ASTM D 882		
aluminum, psi	600	
steel, psi	3,000	
Dielectric strength, ASTM D 149, V/mil	250	
Compressive film strength range ASTM D 4562, psi		125-225 x 10 <sup>3</sup>

### Heat Curing

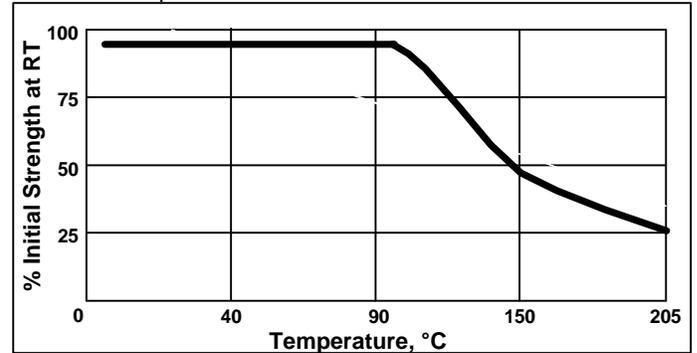


### TYPICAL ENVIRONMENTAL RESISTANCE

Test procedure: Shear strength, ASTM D 4562  
 Substrate: Steel pins and collars  
 Cure procedure: 1 week at 22°C

### Hot Strength

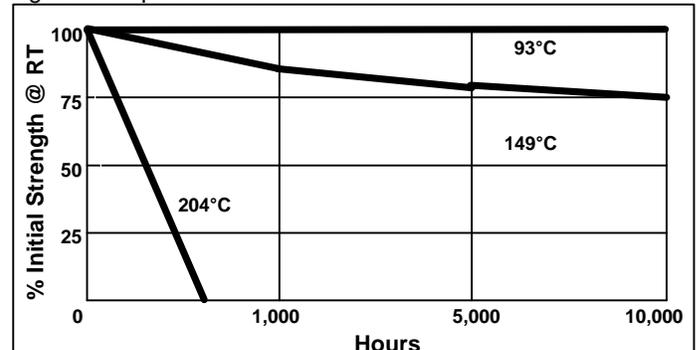
Tested at temperature.



### Heat Aging

Test procedure: Shear strength, ASTM D 4562  
 Substrate: Steel pins and collars  
 Cure procedure: 1 week at 22°C

Aged at temperature indicated and tested at 22°C.



**Chemical / Solvent Resistance**

Test procedure: Shear strength, ASTM D 4562  
 Substrate: Steel pins and collars  
 Cure procedure: 1 week at 22°C

Aged 30 days at 188°F and tested at 22°C.

<b>Solvent</b>	<b>% Strength</b>
Water	56
Butyl Alcohol	92
Toluene	83
SAE 10W Oil	100
Mil. Oil Type #6	100
JP-4	100
JP-5	100
Air Reference	100

**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 use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). It is recommended to confirm the compatibility of the product with such substrates.

**Storage**

Maximum shelf life may be obtained when material is stored in a cool, dry location at a temperature of 65°F (± 15°F). **TO PREVENT CONTAMINATION OF UNUSED MATERIAL, DO NOT RETURN ANY PRODUCT TO ITS ORIGINAL CONTAINER.**

**FOR SPECIFIC SHELF LIFE/RECERTIFICATION POLICY INFORMATION, CONTACT THE LOCTITE CORPORATION, QUALITY DEPARTMENT, ROCKY HILL, CT 06067, TELEPHONE (860) 571-5100.**

**Data Ranges**

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

**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, **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 Loctite Corporation's products. 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 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.