Technical Data Sheet

LOCTITE® 675

October 2022

PRODUCT DESCRIPTION

LOCTITE® 675 provides the following product characteristics:

Technology	Acrylic
Chemical Type	Dimethacrylate ester
Appearance (uncured)	Green liquid
Fluorescence	Positive under UV light
Components	One component - requires no mixing
Viscosity	Low
Cure	Anaerobic
Secondary Cure	Activator
Application	Retaining
Strength	High

LOCTITE® 675 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. Typical applications include filling inner voids in close fitting press fits, keyways, and splines; mounting bearings and bushings, and making press fits even stronger.

Mil-R-46082B

LOCTITE® 675 is tested to the lot requirements of Military Specification Mil-R-46082B. **Note**: This is a regional approval. Please contact your local Technical Service Center for more information and clarification.

ASTM D5363

Each lot of adhesive produced in North America is tested to the general requirements defined in paragraphs 5.1.1 and 5.1.2 and to the Detail Requirements defined in section 5.2.

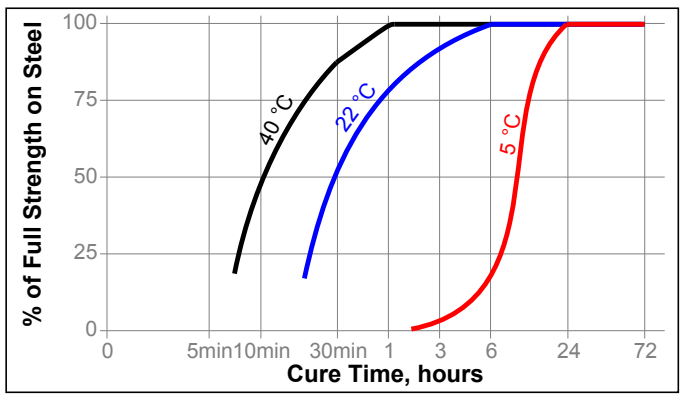
TYPICAL PROPERTIES OF UNCURED MATERIAL

Flash Point - See SDS	>93
Viscosity @ 25°C, mPa·s (cP):	
Brookfield RVT:	
Spindle 1 @ 50 rpm	100 to 150
Toxicity	Low

TYPICAL CURING PERFORMANCE

Cure Speed vs. Temperature

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



TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Coefficient of Thermal Expansion, ISO 11359-2, K^{-1}	75×10^{-6}

TYPICAL PERFORMANCE OF CURED MATERIAL

After 24 hours @ 22°C

Adhesive Properties:

Lap Shear Strength, DIN 54452, N/mm² :	
Steel pins and collars	≥15.8
Compressive Shear, N/mm² :	
Steel pins and collars	≥15.8[LMS]

TYPICAL ENVIRONMENTAL RESISTANCE

Cured 1 week @ 22°C.

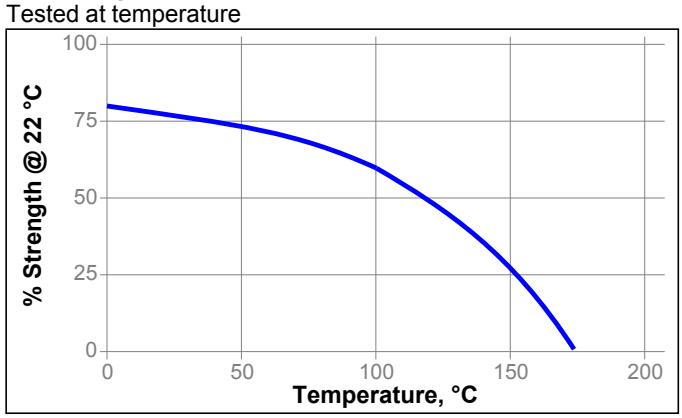
Adhesive Properties:

Lap Shear Strength, ASTM D 4562, N/mm² :

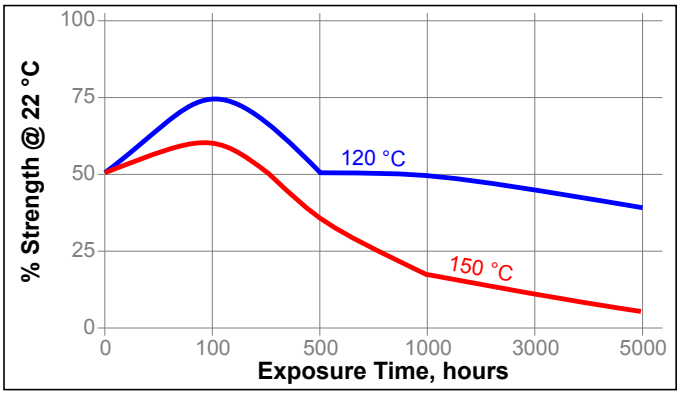
Steel pins and collars

Hot Strength

Tested at temperature



Heat Aging
Aged at temperature indicated and tested @ 23 °C



Chemical/Solvent Resistance
Aged under conditions indicated and tested 23 @

°C		% of initial strength
Environment	**°C**	**720 h**
Water	22	56
Toluene	22	83
SAE 10W Oil	22	100
Mil. oil type #6	22	100
Aircraft fuel (JP-4)	22	100
Aircraft fuel (JP-5)	22	100
Air reference	22	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 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

Determine if the substrates to be bonded are made from an *active* or an *inactive* material. LOCTITE® 675 will react faster with *active* metals. While *inactive* metals will require the use of an Activator to obtain maximum strength and cure speed at room temperature. If the metal is unknown, we recommend to use Activator 7471™.

Active Metals	**Inactive Metals**
Steel	Stainless Steel
Copper	Nickel
Brass	Zinc
Manganese	Cadmium
Bronze	Pure Aluminum
Titanium	Bright Platings
Aluminum Alloy	Anodized Surface

For Assembly

1. For best results, clean all surfaces (external and internal) with a LOCTITE® cleaning solvent and allow to dry.
2. **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.
3. **For Press Fitted Assemblies**, apply adhesive thoroughly to both bond surfaces and assemble at high press on rates.
4. **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.
5. Parts should not be disturbed until sufficient handling strength is achieved.

For Disassembly

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

Clean-up

1. 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[LMS]
LMS dated , . 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.
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. 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 Henkel 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/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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Reference 0.4

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