chanhvinh.com

LOCTITE

Technical Data Sheet

LOCTITE® 620

April 2022

PRODUCT DESCRIPTION

LOCTITE® 620 provides the following product characteristics:

Technology	Acrylic
Chemical Type	Methacrylate ester
Appearance (uncured)	Green liquid
Viscosity	High
Cure	Anaerobic
Secondary Cure	Activator
Application	Retaining
Strength	Medium to High

LOCTITE® 620 is designed for the bonding of cylindrical fitting parts, particularly where bond gaps can approach 0.2 mm and where maximum strength at room temperature is required. The product cures when confined in the absence of air between close fitting metal surfaces and prevents loosening and leakage from shock and vibration. LOCTITE® 620 provides robust curing performance. The product offers higher temperature performance and makes it particularly suited for retaining higher temperature assemblies such as locating pins in radiator assemblies and bearings in auto transmissions. Typical applications include locking bushings and sleeves into housings and on shafts.

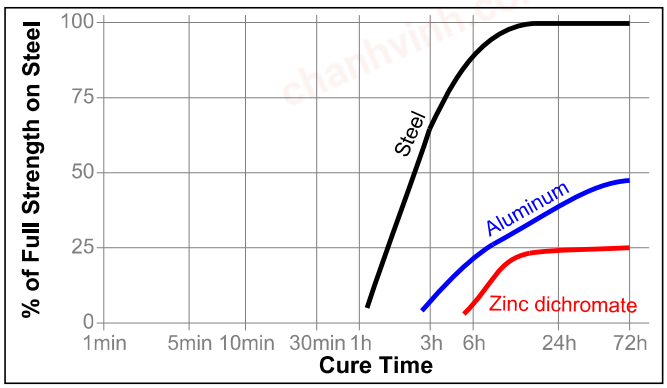
TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 23 °C	1.16
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):	
Spindle 5, speed 20 rpm	8,500
Viscosity, EN 12092 - MV, 25 °C, after 180 s, mPa·s (cP):	
Shear rate 129 s^{-1}	1,800

TYPICAL CURING PERFORMANCE

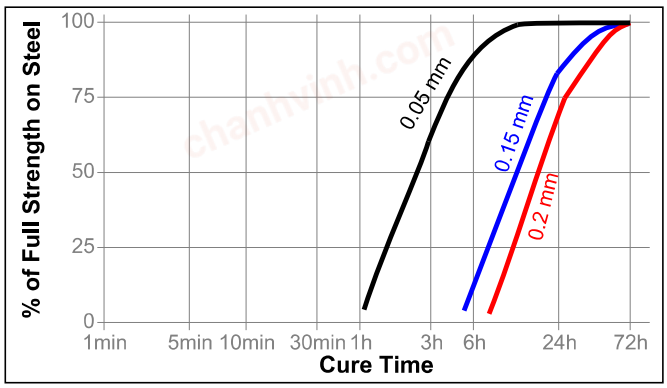
Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the shear strength developed with time on steel pins and collars compared to different materials and tested according to ISO 10123.



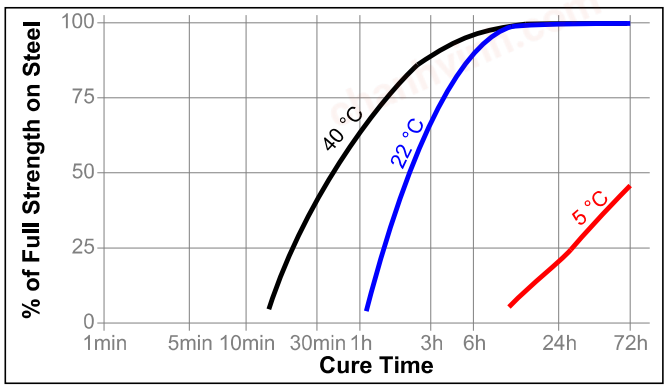
Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. The following graph shows shear strength developed with time on steel pins and collars at different controlled gaps and tested according to ISO 10123. .



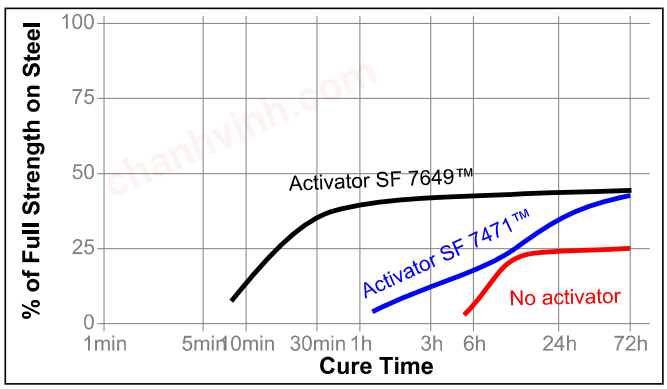
Cure Speed vs. Temperature

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.



Cure Speed vs. Activator

The graph below shows the shear strength developed with time on zinc dichromate steel pins and collars using Activator SF 7471™ and SF 7649™ and tested according to ISO 10123



chanhvinh.com

TYPICAL PERFORMANCE OF CURED MATERIAL

Physical Properties

Coefficient of Thermal Expansion, ISO 11359-2, K^{-1}	80×10^{-6}
Coefficient of Thermal Conductivity, ISO 8302, W/(m·K)	0.1
Specific Heat, kJ/(kg·K)	0.3
Elongation, at break ISO 37, %	<1

Adhesive Properties

Cured for 24 hours @ 23°C

Compressive Shear Strength, ISO 10123:

Steel pins and collars	N/mm²	17
	(psi)	(2,500)

Cured for 24 hours @ 23°C, followed by 24 hours @ 177°C, tested @ 23°C

Compressive Shear Strength, ISO 10123:

Steel pins and collars	N/mm²	24
	(psi)	(3,500)

TYPICAL ENVIRONMENTAL RESISTANCE

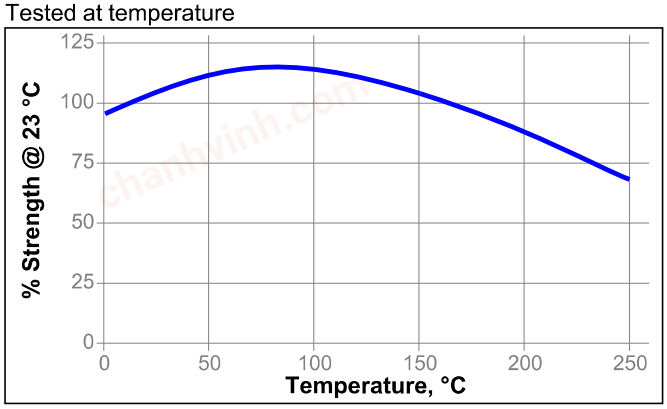
Cured for 1 week @ 23 °C

Compressive Shear Strength, ISO 10123:

Steel pins and collars

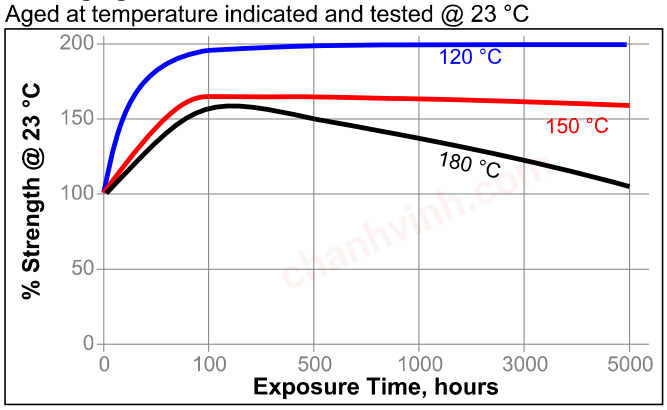
Hot Strength

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**	**100 h**	**500 h**	**1000 h**
Motor oil	125	100	100	100
Unleaded Petrol	22	95	95	95
Brake fluid	22	100	100	100
Water/glycol 50/50	87	95	80	80
Ethanol	22	100	100	75
Acetone	22	95	95	95

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

1. For best results, clean all surfaces (external and internal) with a LOCTITE® cleaning solvent and allow to dry
2. To accelerate cure speed or where large gaps are present, use activator and allow to dry
3. **For Slip Fitted Assemblies**, apply adhesive around the leading edge of the male part and the inside of the female part and use a rotating motion during assembly to ensure good coverage
4. **For Press Fitted Assemblies**, apply adhesive thoroughly to both bond surfaces and assemble at high press on rates
5. **For Shrink Fitted Assemblies,** the adhesive should be coated onto the part to produce a smooth, even film of material. If heating the female part for assembly, coat the male part. If the male part is to be cooled for assembly, coat the female part. If both heating and cooling is to be done, apply material to cooled part. Avoid condensation on cooled parts
6. Parts should not be disturbed until sufficient handling strength is achieved

For Disassembly

1. Remove with standard hand tools
2. Apply localized heat to the assembly to approximately 300°C. Disassemble while hot
3. If this temperature is not possible, heat as much as possible and use mechanical aids

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

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

chanhvinh.com

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 Henkel representative.

Product Specification

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

Approval and Certificate

Please contact a Henkel representative for related approval or certificate of this product.

Data Ranges

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

Temperature/Humidity Ranges: 23 °C / 50% RH = 23±2 °C / 50 ±5% RH

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

Disclaimer

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. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:
In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:
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. Henkel is 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.
Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation or Henkel Canada, Inc.the following disclaimer is applicable:
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 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 Corporation's products. Henkel 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 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.

Trademark usage
Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 0.7

This document was created and digitally signed by tdx.henkel.com at 2025-11-26T18:18:06.885Z