

LOCTITE® SF 770™Known as LOCTITE® 770™
August 2014**PRODUCT DESCRIPTION**

LOCTITE® SF 770™ provides the following product characteristics:

Technology	Primer - Cyanoacrylate
Chemical Type	Aliphatic amine
Solvent	n-Heptane
Active Ingredient Concentration, %	0.07 to 0.13 ^{LMS}
Appearance	Transparent to slightly hazy liquid ^{LMS}
Fluorescence	Positive under UV light ^{LMS}
Viscosity	Very low
Cure	Not applicable
Application	CA surface primer

LOCTITE® SF 770™ is used to make polyolefin and other low energy surfaces suitable for bonding with Loctite cyanoacrylate adhesives. On such treated surfaces the cured performance of LOCTITE® cyanoacrylate adhesives is generally similar to that described in the TDS for the relevant adhesive. It is only recommended for difficult to bond substrates which include polyethylene, polypropylene, polytetrafluoroethylene (PTFE) and thermoplastic rubber materials. LOCTITE® SF 770™ Polyolefin Primer is not recommended in assemblies where high peel strength is required.

TYPICAL PROPERTIES

Specific Gravity @ 25 °C	0.68
Viscosity @ 20 °C, mPa·s (cP)	1.25
Drying Time @ 20 °C, seconds	≤30
On Part Life, hours	≤8
Flash Point - See SDS	

TYPICAL PERFORMANCE

Fixture time and cure speed achieved as a result of using LOCTITE® SF 770™ depend on the adhesive used and the substrate bonded.

Effect on Cure Speed of Cyanoacrylate Adhesives

LOCTITE® SF 770™ also behaves as an activator and accelerates the cure speed of cyanoacrylate adhesives. Fixturing time on most primed substrates is less than 5 seconds but 24 hours at room temperature (22 °C) should be allowed for adhesive to develop maximum bond strength.

Effect on Cured Properties of Cyanoacrylate Adhesives

Products 406, 496 and 460 are based on ethyl, methyl and β-Methoxyethyl esters respectively. Other LOCTITE® liquid products based on these esters will behave in a similar fashion to these examples.

TYPICAL PERFORMANCE OF CURED MATERIAL**Performance Data**

Substrates treated with LOCTITE® SF 770™

After 24 hours @ 22 °C / 55% RH:

Lap Shear Strength, ISO 4587:

Polypropylene and LOCTITE® 406™	N/mm ² (psi)	3 to 10 (440 to 1,450)
Polypropylene and LOCTITE® 496™	N/mm ² (psi)	2 to 7 (290 to 1,015)
Polypropylene and LOCTITE® 460™	N/mm ² (psi)	1 to 4 (145 to 580)
Thermoplastic Rubber and LOCTITE® 406™	N/mm ² (psi)	2 to 6 (290 to 870)
Polytetrafluorethylene (PTFE) and LOCTITE® 406™	N/mm ² (psi)	1 to 6 (145 to 870)
HDPE treated with LOCTITE® SF 770™ to:		
Mild steel (grit blasted) without primer and LOCTITE® 406™	N/mm ² (psi)	4 to 10 (580 to 1,450)
Polypropylene treated with primer and LOCTITE® 496™	N/mm ² (psi)	5 to 15 (725 to 2,175)

TYPICAL ENVIRONMENTAL RESISTANCE

Environmental Resistance of Cyanoacrylate bonds on substrates treated with LOCTITE® SF 770™

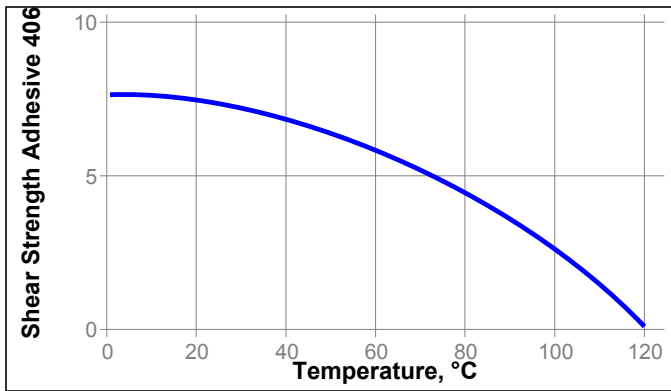
Cured for 24 hours:

Lap Shear Strength, ISO 4587

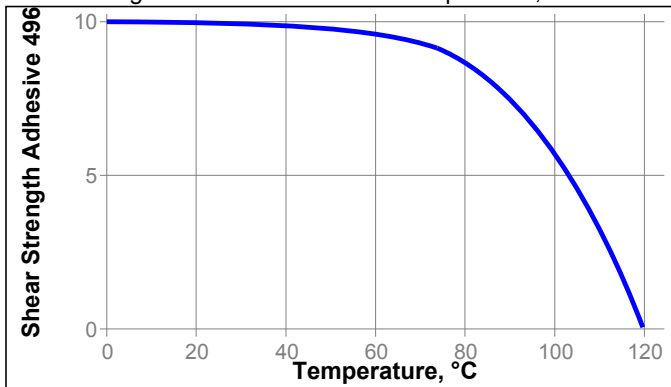
Hot Strength

Polypropylene to Polypropylene

Shear strength measured at elevated temperature, N/mm²

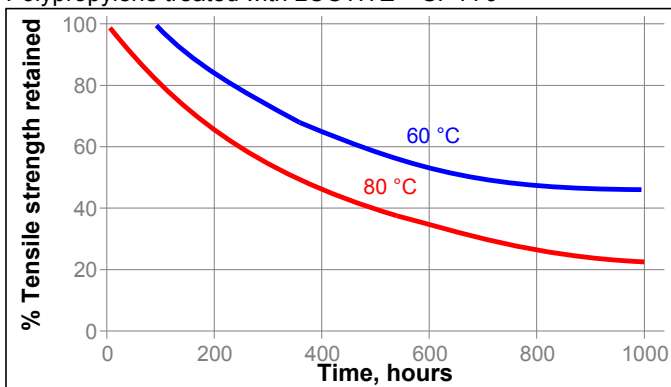


Grit Blasted Mild Steel to Polypropylene
Shear strength measured at elevated temperature, N/mm²



Heat Aging

Polypropylene treated with LOCTITE® SF 770™



Chemical/Solvent Resistance

On Isopropyl Alcohol wiped Polypropylene, treated with LOCTITE® SF 770™. (For effect of other solvents see TDS for relevant adhesive)

Environment	°C	% of initial strength		
		100 h	500 h	1000 h
95% RH	40	100	100	100

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected with a sealant for chlorine or other strong oxidizing materials.

Directions for use:

Primer may be applied by spraying, brushing or dipping at ambient temperature. Excess primer should be avoided. Presence of primer may be detected by means of a UV inspection lamp (365 nm). If polyolefin and more active or easier to bond materials are involved, apply the primer to the polyolefin only.

Handling precautions

Primer must be handled in a manner applicable to highly flammable materials and in compliance with relevant local regulations. The solvent can affect certain plastics or coatings. It is recommended to check all surfaces for compatibility before use.

Loctite Material Specification^{LMS}

LMS dated November 6, 2000. 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

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\mu\text{m} / 25.4 = \text{mil}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

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.

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, 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 Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, 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 1.4