

LOCTITE® SF 770

Known as LOCTITE® 770
May 2021

PRODUCT DESCRIPTION

LOCTITE® SF 770 provides the following product characteristics:

Technology	Primer for Cyanoacrylate
Chemical Type	Aliphatic amine
Solvent	Isopropyl acetate
Appearance	Transparent to slightly hazy liquid
Fluorescence	Positive under UV light
Viscosity	Very low
Cure	Not applicable
Application	CA surface primer

LOCTITE® SF 770 is a primer used to make polyolefin and other low energy surfaces suitable for bonding with LOCTITE® cyanoacrylate adhesives. On such treated surfaces the cured performance of 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 is not recommended in assemblies where high peel strength is required.

TYPICAL PROPERTIES

Specific Gravity @ 23°C	0.87
Viscosity, Cone & Plate, 25°C, mPa·s (cP):	0.62
Cone: CP50-1, Shear Rate: 3,000 s ⁻¹	
Drying Time @ 23°C, seconds	
Steel	9
Polypropylene	9
Polyethylene	8
On Part Life, hours	8

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Substrates treated with primer LOCTITE® SF 770
Cured for 24 hours @ 23 °C / 50% RH:

Block Shear Strength, ISO 13445:

Polypropylene and LOCTITE® 406	N/mm ² 15 (psi) (2,200)
Polypropylene and LOCTITE® 496	N/mm ² 4.8 (psi) (700)
Polypropylene and LOCTITE® 460	N/mm ² 14 (psi) (2,100)
Acetal and LOCTITE® 406	N/mm ² 14 (psi) (2,000)

HDPE treated with LOCTITE® SF 770 to:

Mild Steel (Grit Blasted) without primer and LOCTITE® 406	N/mm ² 15 (psi) (2,200)
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Polypropylene and LOCTITE® 406
(with primer on polypropylene)

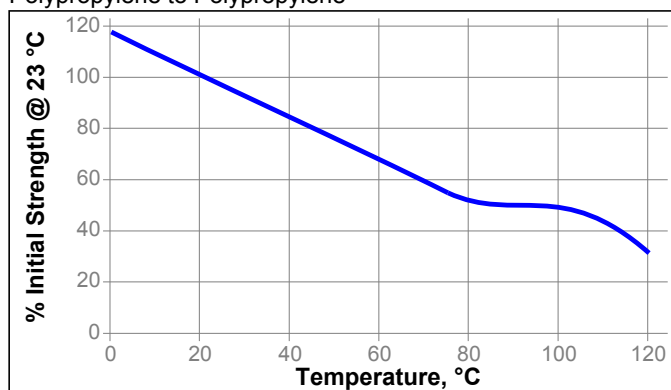
N/mm² 13
(psi) (1,900)

TYPICAL ENVIRONMENTAL RESISTANCE

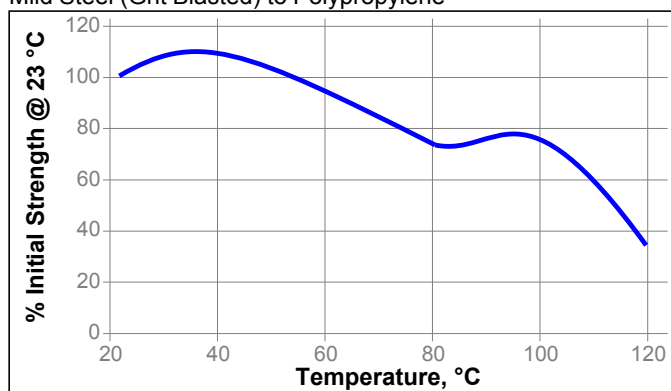
Substrates treated with primer LOCTITE® SF 770 and bonded with adhesive LOCTITE® 401™.
Cured for 72 hours @ 23°C / 50% RH
Block Shear Strength, ISO 13445

Hot Strength

Tested at temperature
Polypropylene to Polypropylene

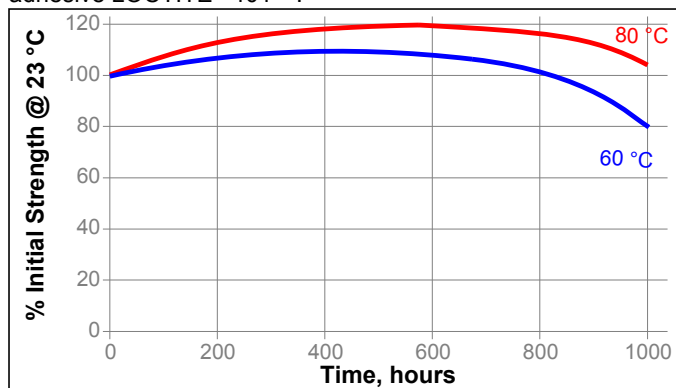


Mild Steel (Grit Blasted) to Polypropylene



Heat Aging

Aged at temperature indicated and tested @ 23 °C,
Polypropylene treated with LOCTITE® SF 770 and bonded with
adhesive LOCTITE® 401™.



Chemical/Solvent Resistance

Aged under conditions indicated and tested @ 23°C,
Substrates treated with primer LOCTITE® SF 770 and bonded
with adhesive LOCTITE® 406™.

Environment	°C	% of initial strength		
		100 h	500 h	1000 h
Water	23	100	100	100
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 as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Safety Data Sheet (SDS).

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. For best results, apply LOCTITE® cyanoacrylate adhesive and bond assembly right after the LOCTITE® SF 770 dries on the surface of the substrate.

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.

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 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

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

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.

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