Technical Data Sheet

LOCTITE® SF 7701™

Known as LOCTITE® 7701™
September 2020

PRODUCT DESCRIPTION

LOCTITE® SF 7701™ provides the following product characteristics:

Technology	Primer - Cyanoacrylate
Chemical Type	Aliphatic amine
Solvent	n-Heptane
Active Ingredient Concentration, %	0.08 to 0.12[LMS]
Appearance	Clear colorless liquid[LMS]
Fluorescence	Positive under UV light[LMS]
Viscosity	Very low
Cure	Not applicable
Application	CA surface primer

LOCTITE® SF 7701™ 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. It is not recommended in assemblies where high peel strength is required. LOCTITE® SF 7701™ is suitable for use in the assembly of **disposable medical devices**.

ISO-10993

LOCTITE® SF 7701™ has been tested to Henkel's test protocols based on ISO 10993 biocompatibility standards, as a means to assist in the selection of products for use in the medical device industry.

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 7701™ depend on the adhesive used and the substrate bonded.

Effect on Cure Speed of Cyanoacrylate Adhesives

LOCTITE® SF 7701™ 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 ß-Methoxyethyl esters respectively. Other LOCTITE® liquid products based on these esters will behave in a similar fashion to these examples. LOCTITE® SF 7701™ is not recommended for use with gel products.

TYPICAL PERFORMANCE OF CURED MATERIAL

Performance Data

Substrates treated with LOCTITE® SF 7701™
After 24 hours @ 22 °C / 55% RH:
Lap Shear Strength, :

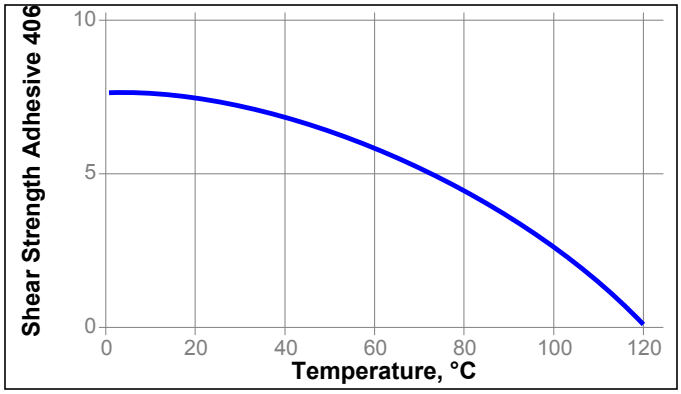
Polypropylene and LOCTITE® 406™	N/mm² (psi)	3 to 10 (440 to 1,450)
Polypropylene and LOCTITE® 496™	N/mm² (psi)	2 to 7 (290 to 1,015)
Polypropylene and LOCTITE® 460™	N/mm² (psi)	1 to 4 (145 to 580)
Thermoplastic Rubber and LOCTITE® 406™	N/mm² (psi)	2 to 6 (290 to 870)
Polytetrafluorethylene (PTFE) and LOCTITE® 406™	N/mm² (psi)	1 to 6 (145 to 870)
HDPE treated with LOCTITE® SF 7701™ to:		
Mild steel (grit blasted) without primer LOCTITE® 406™	N/mm² (psi)	4 to 10 (580 to 1,450)
Polypropylene treated with primer and LOCTITE® 496™	N/mm² (psi)	5 to 15 (725 to 2,175)

TYPICAL ENVIRONMENTAL RESISTANCE

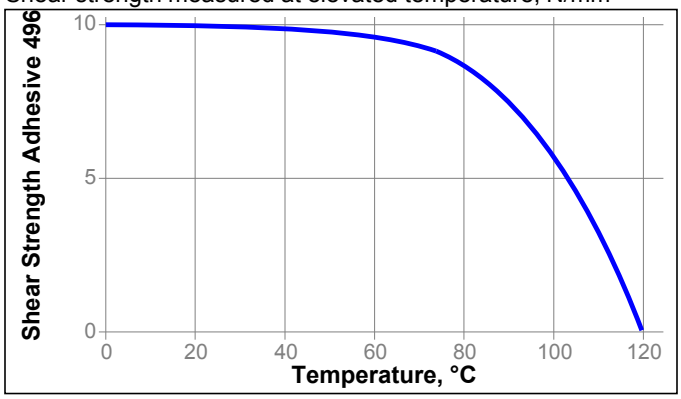
Environmental Resistance of Cyanoacrylate bonds on substrates treated with LOCTITE® SF 7701™
Cured for 24 hours
Lap Shear Strength,

Hot Strength

Polypropylene to Polypropylene
Shear strength measured at elevated temperature, N/mm²

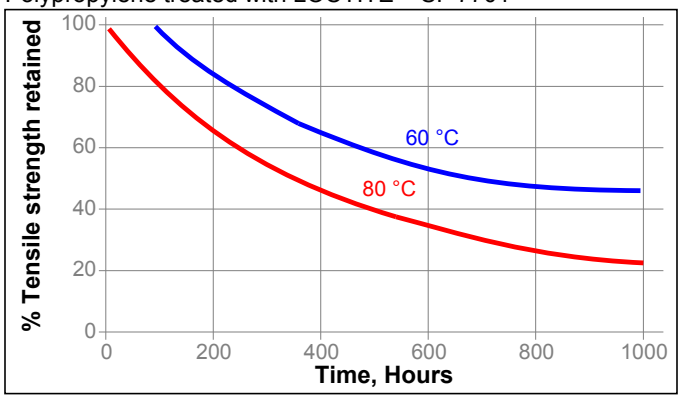


Grit Blasted Mild Steel to Polypropylene
Shear strength measured at elevated temperature, N/mm²



Heat Aging

Polypropylene treated with LOCTITE® SF 7701™



Chemical/Solvent Resistance

On Isopropyl Alcohol wiped Polypropylene, treated with LOCTITE® SF 7701™. (For effect of other solvents see TDS for relevant adhesive)

		% of initial strength		
Environment	**°C**	**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 May 23, 2005. 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

(°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

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Reference 1.3