

LOCTITE NS 5540

KNOWN AS X350729

JANUARY 2018

PRODUCT DESCRIPTION

LOCTITE® NS 5540 provides the following product characteristics:

Technology	Sealant
Chemical Type	Thermally Reactive
Appearance	Brown Liquid
Cure	Heat Cure
Application	Sealant for Threads and Flanges
Application Temperature	15 to 30 °C (59 to 86 °F)
Service Temperature	38 to 700 °C (100 to 1,300 °F)
Strength	High
Specific Benefits	- One component - Low Viscosity - Chemical Resistant

LOCTITE® NS 5540 is a thermal reactive liquid sealing compound that is used in high temperature and high pressure applications. In the presence of heat, LOCTITE® NS 5540 will form a “mechanical type” seal. LOCTITE® NS 5540 will not cement the flanges together, thus, it will not interfere with future repairs of metal-to-metal joints. LOCTITE® NS 5540 is unaffected by thermal cycling. This product has been successfully used to seal flanges carrying up to 2900 psi steam.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Density @ 25 °C	Lb/gal	8.08
Viscosity	mPa s	48,450
Brookfield- DV-E	(cP)	
K-Factor at 55 Ksi		0.14
Flash Point		See SDS

TYPICAL CURING PROFILE

@ 200 °F (93 °C)	hours	36
@ 300 °F (149 °C)	hours	12
@ 400 °F (204 °C)	hours	8
@ 500 °F (260 °C)	hours	3
@ 600 °F (316 °C)	hours	2
@ 700 °F (370 °C)	hours	1

TYPICAL PERFORMANCE OF CURED MATERIAL

Breakloose Torque, ISO 10964 1.25 inch dia, 7 pitch, B-7 Bolt w/ 2H Nut Ambient (215 make-up torque)	Ft*Lb	160
Breakloose Torque, ISO 10964 1.25 inch dia, 7 pitch, B-7 Bolt w/ 2H Nut 1,300 °F (215 make-up torque)	Ft*Lb	100
Threaded Connector Test, seal confirmation 1300°F/100 psi / 1 hour		Pass

TYPICAL ENVIRONMENTAL RESISTANCE

Tables below show chemical resistance:

Alkalis

		Temperature	24 hrs
Sodium Hydroxide	10 %	80 °C	Suitable

Solvents

		Temperature	24 hrs
Water/Steam	100%	107 °C	Suitable
Isopropanol	100%	80 °C	Suitable

Hydrocarbons

		Temperature	24 hrs
ISOPAR M	100%	80 °C	Suitable
Transmission Fluid	100%	107 °C	Suitable

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

Surface Preparation

Remove dirt, oil, grease etc. with a suitable cleaner, e.g. Loctite® SF 7840™ (Loctite® Natural Blue® cleaner/degreaser).

Application

1. Surface should be clean and dry (free from oil or foreign material to ensure proper sealing/adhesion)
2. Apply a thin coat to sealing surface with brush (if sealing threads, apply only to the male threads)
3. Close and tighten joint (torqued to the equipment manufacturer's specifications if sealing a bolted flange)
4. Product will cure in service with heat (See Note)

Note: In high pressure applications or when pressure testing at ambient, it is recommended to pre-cure with a heat gun, oven, or to dry fire / blow down at atmospheric (running heat without pressure). Unlike silicone or epoxy products, our thermosetting sealants require heat to cure.

Clean-up

Immediately after use, clean tools with suitable cleaner, e.g. Loctite® SF 7070™ or a solvent such as acetone or Isopropyl alcohol. Once cured, the material can only be removed mechanically.

Storage

The product is classified as flammable and must be stored in an appropriate manner in compliance with relevant regulations. Do not store near oxidizing agents or combustible materials. Store product in the unopened container in a dry location. Storage information may also be indicated on the product container labelling.

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Optimal Storage: 8 to 21 °C (50 to 70 °F) . 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 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.

Shelf Life of Unopened Container:

24 months

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 Laboratory Data Sheet (LDS) 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 LDS. As this is an experimental product, the data is **for reference only** and should not be taken as specifications.

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Reference **N/A**