

LOCTITE® SI 5470™

November 2019

PRODUCT DESCRIPTION

LOCTITE® SI 5470™ provides the following product characteristics:

Technology	Silicone
Appearance (uncured)	White/pale yellow paste <small>LMS</small>
Chemical Type	Acetoxy
Temperature Range, °C	-40 to 50
Components	One component with mechanically mixed nitrogen gas
Primary cure	Ultraviolet (UV) light
Secondary Cure	Moisture
Application	Gasketing
Cure	

LOCTITE® SI 5470™ is a dual cure UV + Moisture silicone sealant. The product is mixed mechanically with nitrogen gas to produce a closed cell foam gasket. Upon exposure to sufficient UV light, this product forms a soft, flexible, low modulus serviceable gasket for sealing applications. This product offers excellent adhesion to plastics and metals.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.03
Extrusion Rate, g/min:	
Pressure 0.62 MPa, temperature 25 °C:	
Semco Cartridge	155

TYPICAL CURING PERFORMANCE

Normal processing conditions will include exposure to sufficient UV light irradiance to effectively cure the material. Surface and/or atmospheric moisture will promote the cure of material in shadowed regions. Although functional strength is developed almost instantly due to the UV curing nature of LOCTITE® SI 5470™, increased cure properties are developed during 72 hours at ambient conditions.

Surface Cure

Tack Free Time , ASTM C679 , seconds	15
<small>70 mW/cm²; measured @365 nm</small>	
UV Depth of Cure , ASTM C679 , mm	12
<small>60 seconds @70 mW/cm², measured @365 nm Non-reflective black vinyl cap</small>	

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Shore Hardness, ISO 868 , Durometer OO	54
Elongation, at break, ISO 37, %	163
Tensile Strength , ISO 37, N/mm ²	0.3
(psi)	(43.5)

Physical Properties

Compression Set @20% initial deflection, %
ASTM D395, method B:

Clamped for 22 hours @25°C	21 %
Clamped for 70 hours @25°C	28 %

Compression Set @30% initial deflection, %
ASTM D395, method B:

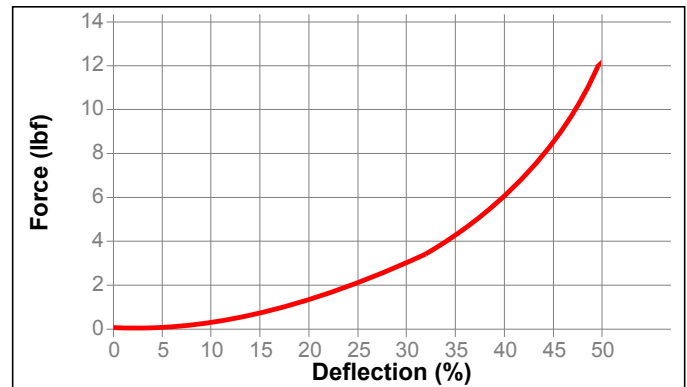
Clamped for 22 hours @25°C	20 %
Clamped for 70 hours @25°C	28 %

Compression Set @40% initial deflection, %
ASTM D395, method B:

Clamped for 22 hours @25°C	19 %
Clamped for 70 hours @25°C	30 %

Force to Deflect

The following graph shows the force required to deflect the product a given percentage, lbf, ASTM D575, 1/2" thickness, 1 1/8" diameter.



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:

1. This product is UV light sensitive: exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling. .
2. This product is sensitive to atmospheric moisture: exposure to air should be kept to a minimum during storage and handling. .

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 28°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.

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. 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, 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 1.0