

# LOCTITE® SI 5145

November 2024

## PRODUCT DESCRIPTION

LOCTITE® SI 5145 provides the following product characteristics:

<b>Technology</b>	Silicone
Chemical type	Alkoxy silicone
Appearance (uncured)	Translucent liquid
Components	One component - requires no mixing
<b>Cure</b>	Room temperature vulcanizing (RTV)
<b>Application</b>	Bonding, sealing or coating
Specific benefits	Non-corrosive
Flexibility	Enhances load bearing & shock absorbing characteristics of the bond area.
Strength	High

LOCTITE® SI 5145 is specifically formulated for bonding, sealing, and coating of electronic devices, especially for military, automotive and industrial electronic. The non-slumping nature of this product makes it ideal for reinforcing and strain relieving delicate components. LOCTITE® SI 5145 resists weathering, moisture, ozone and retains its properties through severe environments. This product is used in applications requiring continuous service between -50°C and 200°C.

### Mil-A-46146B

LOCTITE® SI 5145 is tested to the lot requirements of Military Specification Mil-A-46146B. **Note:** This is a regional approval. Please contact your local Technical Service Center for more information and clarification.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific gravity @ 25°C	1.14
Solids/non-volatile content, %	≥92
Extrusion rate, g/min	
Pressure, 0.62 MPa, temperature 25°C	
Semco cartridge	≥40

## TYPICAL CURING PERFORMANCE

### Surface cure

Tack Free Time is the time required to achieve a tack free surface:

Tack free time, hours	
Cured at @ 25°C/ 50±5 % RH	≤5

## TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 1 week @ 21 to 26°C / 50±5% RH

### Physical properties

Coefficient of thermal expansion, ISO 11359-2, K <sup>-1</sup>		2.8×10 <sup>-4</sup>
Coefficient of thermal conductivity ASTM E 1225, W/(m·K)		0.2
Water Vapor Trans. Rate, ASTM E96, g/(h·m <sup>2</sup> )		0.48
Water absorption, ISO 62, %:		
24 hours in water @ 23°C		0.01
Shore hardness, ISO 868, Durometer A		≥25
Elongation, ISO 37, %		≥500
Tensile strength, ISO 37	N/mm <sup>2</sup> (psi)	≥3.4 (≥493)
Tear strength, ISO 34-1, Die B	N/mm (lb/in)	40 (230)

### Electrical properties

Dielectric breakdown strength, IEC 60243-1, kV/mm	18
Volume resistivity, IEC 60093, Ω·cm	4×10 <sup>15</sup>
Dielectric constant/dissipation factor, IEC 60250:	
100 Hz	3.0 / 0.006
1 MHz	3.1 / 0.01

## TYPICAL PERFORMANCE OF CURED MATERIAL

Cured for 1 week @ 23°C / 50±5 % RH

### Adhesive properties

Peel adhesion (pli method), ASTM D 903		
Aluminum	N/mm (lb/in)	13 (75)
Steel	N/mm (lb/in)	8.7 (50)

## TYPICAL ENVIRONMENTAL RESISTANCE

### Heat resistance

Cured for 1 week @ 200°C		
Shore hardness, ISO 868, Durometer A		45
Elongation, ISO 37, %		330
Tensile strength, ISO 37	N/mm <sup>2</sup> (psi)	3 (435)

**Hydrolytic stability**

Cured for 28 days @ 95°C / 98% RH

Shore hardness, ISO 868, Durometer A		29
Elongation, ISO 37, %		500
Tensile strength, ISO 37	N/mm <sup>2</sup> (psi)	5 (725)

**GENERAL INFORMATION**

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

**Directions for use**

1. For best performance bond surfaces should be clean and free from grease.
2. Full performance properties will develop over 72 hours.
3. Moisture curing begins immediately after the product is exposed to the atmosphere, therefore parts to be assembled should be mated within a few minutes after the product is dispensed.
4. Excess material can be easily wiped away with non-polar solvents.

**Storage**

Store product in the unopened container in a dry location. Storage information may be indicated on the product package 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.

**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

**Approval and Certificate**

Please contact Henkel representative for related approval or certificate of this product.

**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/mm<sup>2</sup> 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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