

LOCTITE® SI 5293

November 2023

PRODUCT DESCRIPTION

LOCTITE® SI 5293 provides the following product characteristics:

Technology	Silicone
Chemical type	Alkoxy Silicone
Appearance (uncured)	Transparent amber to yellow liquid
Fluorescence	Positive under UV light
Components	One component - requires no mixing
Cure	Ultraviolet (UV) light
Secondary Cure	Moisture for shadowed areas
Application	Conformal coating

LOCTITE® SI 5293 is designed to provide environmental protection for printed circuit boards and other sensitive electronic components.

Typical properties of uncured material

Specific gravity @ 25°C	1.0
Flash point - see SDS	
Viscosity, Brookfield - RVT, 25, °C Spindle 1, speed 10 rpm	400 to 800
Solids/non-volatile content, %	≥85

Typical curing performance

LOCTITE® SI 5293 cures when exposed to UV radiation of 365nm. 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 5293 increased cure properties are developed during 72 hours at ambient conditions.

Surface cure

Tack free time, hours	
Cured @ 22 °C / 50±5 % RH	10 to 24

Typical properties of cured material

Cured @ 70 mW/cm², for 60 seconds per side using a glass filtered metal halide light source plus 7 days @ 22 °C / 50±5% RH.

Physical properties:

Coefficient of Thermal Expansion, ISO 11359-2, K ⁻¹ :	300×10 ⁻⁶
Coefficient of Thermal Conductivity, ISO 8302, W/(m·K)	0.18
Glass Transition Temperature ISO 11359-2, °C	-40
Water vapor trans. rate, ASTM E96, method A, g/(h·m ²)	1.23 to 1.37

Electrical properties:

Volume resistivity, IEC 60093, Ω·cm	1×10 ¹⁴
Dielectric breakdown strength, IEC 60243-1, kV/mm	16
Dielectric Constant / Dissipation Factor, IEC 60250:	
100 Hz	4.6 / 0.005
1 kHz	4.1 / 0.006
1 MHz	4.1 / 0.006

Cured @ 70 mW/cm², for 60 seconds per side

Physical properties:

Shore Hardness, ISO 868, Durometer OO	60 to 90
UV Depth of Cure, mm	≥1.3

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 Material Safety Data Sheet.

Directions for use

1. Separate LOCTITE® SI 5293 from the liner.
2. Peel away enough silicone wrap to complete the repair.
3. Press one end onto the surface and begin to wrap.
4. Stretch the silicone wrap tightly while wrapping over the repair area.
5. Wrap the repair area with a two-thirds overlap for a proper seal.
6. Finish wrapping by overlapping the silicone wrap with a previous layer.

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

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

Disclaimer

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