

LOCTITE STYCAST SC 3613

December 2016

PRODUCT DESCRIPTION

LOCTITE STYCAST SC 3613 provides the following product characteristics:

Technology	Silicone
Appearance	clear
Components	One-component
Product Benefits	<ul style="list-style-type: none"> • Elastomeric • High purity • Optically clear • Thixotropic • Low temperature cure • Low stress elastomer • Low viscosity
Cure	Heat Cure
Application	Protective Coating
Typical Assembly Applications	LEDs, LED display coating and IC and hybrid passivation
Operating Temperature	-40 to 200 °C
Percent Solids, %	100

LOCTITE STYCAST SC 3613 protective coating is engineered to meet the high reliability performance requirements for the optoelectronic / semiconductor industry. It minimizes alpha particle interactions with sensitive circuitry.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield , mPa·s (cP)	3,500
Specific Gravity	0.96 to 1.0
Shelf Life:	
@ 4°C, months	3
@ -40°C, months	9
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

<5 minutes @ 175°C or
10 minutes @ 160°C or
30 minutes @ 120°C

Post Cure

1 to 2 hours @ 150°C

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Shore Hardness, ISO 868, Durometer A	30
Extractable Ionic Content, ppm:	
Halogens or Alkali Metals	<3

Electrical Properties

Dielectric Constant / Dissipation Factor, IEC 60250:	
1kHz	3.01 / 0.001
Dielectric Breakdown Strength IEC 60243-1, kV/mm	≥23
Volume Resistivity, IEC 60093, Ω·cm	≥2×10 ¹⁵

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt and oils which can cause poor adhesion or corrosion in a bonded part.
2. The cure of this silicone product may be inhibited through contact with certain contaminants.
3. Avoid contact with butyl and chlorinated rubbers, amines, sulfur, sulfur containing materials, tin containing components and heavy metal salts.
4. Substrates in question should be evaluated for compatibility before application of this product.
5. In addition, molds, mixing equipment, oven, and other apparatus that will be used in the preparation and curing of this product should be free of inhibiting contaminants.
6. LOCTITE STYCAST SC 3613 may be diluted with electronic grade solvents such as toluol or Xylene to reduce product viscosity. A non-flammable, fast drying solvent such as 1,1,1 Trichloroethane is suggested.
7. If diluted, it is recommended that the product be dried in warm air below the solvent flash point for 1 to 4 minutes before cure initiation so as to eliminate bubble or void occurrence.
8. Application: Brush, flowcoating or dipping.

STORAGE:

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

Optimal Storage : +04 °C

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