



# STYCAST W 67

**High Temperature Resistant,  
Low Viscosity, Epoxy Impregnant**

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## PRODUCT DESCRIPTION

LOCTITE STYCAST W 67 provides the following product characteristics:

<b>Technology</b>	Epoxy
<b>Technology (Part B)</b>	Anhydride
Appearance - Part A	Clear Yellow liquid
Appearance - Part B	Clear Yellow liquid
Components	Two component - requires mixing
Mix Ratio by weight: Part A: Part B	100 : 85
Product Benefits	<ul style="list-style-type: none"> <li>• Low viscosity</li> <li>• High temperature resistance</li> <li>• Non-conductive</li> </ul>
<b>Cure</b>	Heat cure
<b>Application</b>	Encapsulant
Operating Temperature	-20 to +230°C
Typical Assembly Applications	Coils, Transformers, Chokes and Solenoids

LOCTITE STYCAST W 67 encapsulant is designed for high throughput assembly operations. The material's low viscosity and excellent wetting properties allow for complete impregnation when used either on small slightly wound coils or large castings.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

### Part A Properties

Viscosity, Brookfield, 25 °C, mPa·s (cP)	550
Density, g/cm <sup>3</sup>	1.2
Flash Point - See SDS	

### Part B Properties

Viscosity, Brookfield, 25 °C, mPa·s (cP)	250
Density, g/cm <sup>3</sup>	1.23
Flash Point - See SDS	

### Mixed Properties

Viscosity, Brookfield, 25 °C, mPa·s (cP)	250
Density, g/cm <sup>3</sup>	1.23
Work Life (100 g mass) @ 25 °C, days	30
Shelf Life @ 25°C, days	180
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Cure Schedule

- 2 to 4 hours @ 125°C
- 1 to 2 hours @ 150°C

Cure at any one of the recommended cure schedules.

For optimum performance, follow the initial cure with a post cure of 4 to 16 hours @ 175°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 :

Hardness, Shore D	85
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### Electrical Properties:

Volume Resistivity @ 25°C, ohm-cm	1×10 <sup>15</sup>
Dielectric Strength, kV/mm	17.7
Dielectric Constant / Dissipation Factor@ 1 KHz	3.3/0.006

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Miscellaneous:

Flexural Strength	N/mm <sup>2</sup> 116 (psi) (16,800)
Compressive Strength	N/mm <sup>2</sup> 150 (psi) (21,800)
Tensile Strength	N/mm <sup>2</sup> 71 (psi) (10,300)

## 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. Accurately weigh resin and hardener into a clean container in the recommended ratio. Weighing apparatus having an accuracy in proportion to the amounts being weighed should be used.
3. Blend components by hand, using a kneading motion, for 2 to 3 minutes and scrape the bottom and sides of the mixing container frequently to produce a uniform mixture.
4. If possible, power mix for an additional 2 to 3 minutes. Avoid high mixing speeds. This can entrap excessive amounts of air. It can also cause overheating of the mixture, resulting in reduced working life.
5. To eliminate moisture absorbed in coils, paper, and other insulation components, the part to be impregnated or potted should be preheated to 100 to 120°C.
6. For coil molding, preheat the components and mold to 70 to 90°C prior to pouring.
7. Submerge components in reservoir containing impregnating resin and allow to stand until assembly is completely penetrated by resin mixture.
8. Vacuum can be applied to ensure complete penetration in components containing tightly wound coils.
9. Remove impregnated assembly from reservoir and allow to drain.



a) Small units (under 1 cm<sup>3</sup> - in volume).

These can be at room temperature when immersed in the blended resin.

Normally avacuum of 1 – 5 mm Hg, applied for 5 minutes, will be sufficient.

Allow to stand under resin, after breaking the vacuum, for about 5 minutes.

Cure for about 2 hours at 120°C followed by 16 hours at 180°C.

## b) Large units.

It is advisable that they be preheated to 110°C – 120°C prior to immersion.

Increase evacuation and immersion time to insure thorough impregnation. (This could total 1 hour for large units.)

The cure at 120°C should also be extended to about 4 hours.

Finally, cure at 180°C for 18 hours.

**Not for product specifications**

The technical data contained herein are intended as reference only.

Please contact your local quality department for assistance and recommendations on specifications for this product.

**Storage**

Store in original, tightly covered containers in clean, dry areas.

Storage information may be indicated on the product container labeling.

**Optimal Storage: 25°C. Storage below 25°C or greater than 25°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 Technical Service Center or Customer Service Representative.

**Disclaimer****Note:**

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.

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Reference 1

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