

# LOCTITE STYCAST U 2500 TEM

February 2016

## PRODUCT DESCRIPTION

LOCTITE STYCAST U 2500 TEM provides the following product characteristics:

<b>Technology</b>	Polyurethane
Appearance - Part A	Black
Appearance - Part B	Amber
Components	Two-component
Mix Ratio by weight: Part A: Part B	100 : 7
Mix Ratio by volume: Part A: Part B	100 : 8.5
Product Benefits	<ul style="list-style-type: none"> <li>• Low viscosity</li> <li>• Flexible</li> <li>• Excellent wetting properties</li> </ul>
<b>Cure</b>	Room Temperature or Heat Cure
<b>Application</b>	Encapsulant
Operating Temperature	-40 to +125
Typical Assembly Applications	Transformers, PCB's and other insulation applications

LOCTITE STYCAST U 2500 TEM flexible polyurethane encapsulant is formulated to have low viscosity and excellent wetting properties allowing complete impregnation of either small slightly wound coils or large castings.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

### Part A Properties

Viscosity @ 25 °C, mPa·s (cP)	12,500
Density, g/cm <sup>3</sup>	1.5
Flash Point - See SDS	

### Part B Properties

Viscosity @ 25 °C, mPa·s (cP)	5
Density, g/cm <sup>3</sup>	1.23
Flash Point - See SDS	

### Mixed Properties

Mixed Viscosity @ 25°C, mPa·s (cP)	6,000
Pot Life @ 25 °C, minutes	45
Shelf Life @ 18 to 25 °C, days	180
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE AS MIXED

### Recommended Cure Schedule

24 hours @ 25°C

Complete cure at room temperature will be obtained after 2 to 3 days.

### Alternate Cure Schedule

4 hours @ 60°C

A post cure of 2hours @ 100 to 120°C will improve final end-properties.

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 AS MIXED

### Physical Properties

Hardness, Shore A @ 25 °C	75
Young's modulus (E)	N/mm <sup>2</sup> 7 (psi) (1,015)
Elongation, %	70
Thermal Conductivity, W/(m·K)	0.6
Glass Transition Temperature (Tg) by TMA, °C	-68
Coefficient of Linear Thermal Expansion, ppm/°C	175
Moisture Absorption, 24 hrs @ 25°C, %	0.8

### Electrical Properties

Volume Resistivity@ 500 Volts, ohms-cm	5×10 <sup>11</sup>
Surface Resistivity, ohms	1×10 <sup>14</sup>
Dielectric Constant / Dissipation Factor @ 1 MHz	6.0/0.06

## TYPICAL PERFORMANCE OF CURED MATERIAL AS MIXED

### Miscellaneous

Tensile Strength	N/mm <sup>2</sup> 3.5 (psi) (507)
Tensile Lap Shear Strength, Al to Al	N/mm <sup>2</sup> 2.5 (psi) (362)

## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

1. Moisture sensitive before mixing.
2. Before use, stir Part A to make it homogeneous.
3. Accurately weigh out the required amount of part A and part B as stated in the mix ratio.
4. Mix thoroughly, degas and fill the casting.

## Storage

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

### Optimal Storage : 18 to 25 °C

Once opened, containers should be purged with dry nitrogen.

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.

**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.

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**Conversions**

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

Reference 1

**Disclaimer****Note:**

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