

# LOCTITE STYCAST RE 2039 HD 3561

March 2019

## PRODUCT DESCRIPTION

LOCTITE STYCAST RE 2039 HD 3561 provides the following product characteristics:

<b>Technology</b>	Epoxy
Appearance, Resin (Part A)	Amber
Appearance, Hardener (Part B)	Amber
Appearance (cured)	Amber
Components	Two components - requires mixing
Product Benefits	<ul style="list-style-type: none"> <li>• Low viscosity</li> <li>• Heat resistant</li> <li>• Thermal shock resistant</li> </ul>
Mix Ratio by volume: Part A: Part B	100 : 33
Mix Ratio by weight: Part A: Part B	100 : 30
<b>Cure</b>	Heat cure or Room temperature
<b>Application</b>	Encapsulation, Potting

LOCTITE STYCAST RE 2039 HD 3561 is an unfilled system recommended for potting applications where rigid or flexible wire leads protrude directly from the encapsulation and where high impact strength is required. This system eliminates microscopic cracking on flexing of leads. It adheres extremely well to lead materials, such as vinyl or neoprene.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

### Part A Properties LOCTITE STYCAST RE 2039

Density @ 25°C, g/cc	1.16
Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP): Spindle 5, speed 10 rpm	13,000
Color, maximum	Gardner 4
Shelf Life @ 25°C (from date of shipment), days	365

### Part B Properties LOCTITE STYCAST HD 3561

Density @ 25°C, g/cc	1.01
Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP): Spindle 1, speed 20 rpm	20
Color, maximum	Gardner 3
Shelf Life @ 25°C (from date of shipment), days	365

## Mixed Properties LOCTITE STYCAST RE 2039 HD 3561

Density, g/cc	1.08
Specific Gravity	1.08
Viscosity @ 25 °C, mPa·s (cP)	600
Pot Life, 200 gm mass, @ 25 °C, minutes	35
Peak Exotherm Temperature, 200 gram mass, °C	190

## TYPICAL CURING PERFORMANCE AS MIXED

### Recommended Cure Schedule

3 hours @ 60°C

### Alternate Cure Schedule

24 hours @ 25°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 AS MIXED

### Physical Properties

Coefficient of Linear Thermal Expansion, in/in/°C x 10 <sup>-6</sup> :	
@ 30 to 70°C	54
@ 70 to 90°C	105
Elongation, %	4.1
Hardness, Shore D	78
Heat Deflection Temperature @ 264 psi, °C	84
Izod Impact Strength, ft-lb/in. of notch	1.4
Linear Shrinkage, %	0.6
Moisture Absorption, 24 hrs immersion, %	0.43
Thermal Conductivity, cal x cm/sec x cm <sup>2</sup> x °C	5 x 10 <sup>-4</sup>

### Electrical Properties

Dielectric Strength, 10 mil thickness, volts/mil	1,800
Arc Resistance, seconds	94
Volume Resistivity, ohm-cm :	
@ 25°C	4 x 10 <sup>14</sup>
@ 80°C	4 x 10 <sup>12</sup>
Dielectric Constant / Dissipation Factor @ 25°C:	
100 Hz	4.96 / 0.007
1 kHz	5.0 / 0.008
10 kHz	4.84 / 0.022
100 kHz	4.57 / 0.048

**Dielectric Constant / Dissipation Factor @ 80°C:**

100 Hz	5.6 / 0.029
1 kHz	5.6 / 0.012
10 kHz	5.17 / 0.014
100 kHz	4.92 / 0.027

**TYPICAL CURED PERFORMANCE AS MIXED**

All measurements are taken at 25°C, unless otherwise noted.

**Miscellaneous**

Tensile Strength	N/mm <sup>2</sup>	53.8
	(psi)	(7,800)
Compressive Strength	N/mm <sup>2</sup>	200
	(psi)	(29,000)
Compressive Yield Strength	N/mm <sup>2</sup>	89.6
	(psi)	(13,000)
Flexural Strength	N/mm <sup>2</sup>	95.1
	(psi)	(13,800)

**GENERAL INFORMATION**

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

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

**Liquid Storage - Liquids should be stored at 25°C or below, in closed containers. If stored below 25°C, the material MUST be allowed to come to room temperature, in the sealed container, to avoid moisture contamination.**

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**

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

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