

LOCTITE STYCAST RE 2039 HD 3561

March 2019

PRODUCT DESCRIPTION

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

Technology	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"> • Low viscosity • Heat resistant • Thermal shock resistant
Mix Ratio by volume: Part A: Part B	100 : 33
Mix Ratio by weight: Part A: Part B	100 : 30
Cure	Heat cure or Room temperature
Application	Encapsulation, Potting

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.

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

TYPICAL PROPERTIES OF CURED MATERIAL AS MIXED

Physical Properties

Coefficient of Linear Thermal Expansion, in/in/°C x 10 ⁻⁶ :	
@ 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 ² x °C	5 x 10 ⁻⁴

Electrical Properties

Dielectric Strength, 10 mil thickness, volts/mil	1,800
Arc Resistance, seconds	94
Volume Resistivity, ohm-cm :	
@ 25°C	4x10 ¹⁴
@ 80°C	4x10 ¹²
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 ²	53.8
	(psi)	(7,800)
Compressive Strength	N/mm ²	200
	(psi)	(29,000)
Compressive Yield Strength	N/mm ²	89.6
	(psi)	(13,000)
Flexural Strength	N/mm ²	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

(°C x 1.8) + 32 = °F
 kV/mm x 25.4 = V/mil
 mm / 25.4 = inches
 N x 0.225 = lb/F
 N/mm x 5.71 = lb/in
 psi x 145 = N/mm²
 MPa = N/mm²
 N·m x 8.851 = lb·in
 N·m x 0.738 = lb·ft
 N·mm x 0.142 = oz·in
 mPa·s = cP

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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

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. 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage: [Except as otherwise noted] All trademarks in this document are trademarks and/or registered trademarks of Henkel and its affiliates in the U.S. and elsewhere.

Reference 2