Technical Data Sheet

LOCTITE STYCAST RE 2039/ HD 0242

July 2019

PRODUCT DESCRIPTION

LOCTITE STYCAST RE 2039/ HD 0242 provides the following product characteristics:

Technology	Epoxy
Appearance,Resin (Component A)	Amber
Appearance, Hardener (Component B)	Dark amber
Appearance (cured)	Amber
Components	Two components - requires mixing
Product Benefits	• Excellent electrical properties • Excellent physical properties at elevated temperatures
Mix Ratio, (by weight) Resin : Hardener	100 : 15
Mix Ratio, (by volume) Resin : Hardener	100 : 17
Cure	Heat cure
Application	Encapsulation and Potting

LOCTITE STYCAST RE 2039/ HD 0242 is an unfilled, 100% solids, epoxy liquid casting system that has excellent electrical and physical properties at elevated temperatures.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties LOCTITE STYCAST RE 2039

Viscosity, Brookfield - RVF, 25 °C, cps:	
Spindle 5, speed 10 rpm	12,500
Density @ 25ºC, gm/cc	1.16
Color , maximum	Gardner 4
Filler Content, %	0
Shelf Life @ 25°C (from date of shipment), days	365
Flash Point - See SDS	

Part B Properties HD 0242

Viscosity, Brookfield - RVF, 25 °C, cps:	
Spindle 2, speed 20 rpm	80
Density @ 25ºC, gm/cc	1.03
Filler Content, %	0
Shelf Life @ 25°C (from date of shipment), days	365
Flash Point - See SDS	

Mixed Properties

Viscosity @ 25 °C, cps:	
Spindle 4, speed 2 rpm	4,000
Pot Life, 200 gm mass, @ 25 °C, minutes	45
Gel Time, 200 gm mass @ 40 °C, minutes	20
Gel Time, 10gm mass @ 100 °C, minutes	3.5
Gel Time, 10 gm mass @ 121 °C, minutes	2.5
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE AS MIXED

Recommended Cure Schedule

1 hour @ 40°C plus 2 hours @ 150°C

Alternate Cure Schedule

Gel @ 25 ºC plus 2 hours @ 150ºC

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/ºC x 10^{-6}:	
@ 25 to 90ºC	65
Thermal Conductivity, cal x cm/sec x cm² x ºC, 10^{-4}	5
Glass Transition Temperature (Tg), °C	125
Hardness, Shore D	88
Linear Shrinkage, %	2.05
Moisture Absorption, 24 hrs immersion, %	0.11
Guide to Operating Class, IEEE °C	130

Electrical Properties:

Dielectric Strength, volts/mil	1,500
Arc Resistance, seconds	100
Volume Resistivity, ohm-cm:	
@ 25 °C	3×10^{16}
@ 85 °C	1×10^{14}
@ 130 °C	1×10^{12}
Surface Resistivity, ohms:	
@ 25 °C	8×10^{16}
@ 85 °C	7×10^{14}
@ 130°C	3×10^{13}

Dielectric Constant / Dissipation Factor @ 25ºC:	
@ 100 Hz	4.1/0.007
@ 1 kHz	4.0/0.014
@ 10 kHz	3.9/0.025
@ 100 kHz	3.7/0.031
Dielectric Constant / Dissipation Factor @ 85ºC:	
@ 100 Hz	4.3/0.003
@ 1 kHz	4.2/0.004
@ 10 kHz	4.2/0.006
@ 100 kHz	4.1/0.015
Dielectric Constant / Dissipation Factor @ 130ºC:	
@ 100 Hz	4.6/0.036
@ 1 kHz	4.5/0.013
@ 10 kHz	4.4/0.009
@ 100 kHz	4.5/0.007

TYPICAL CURED PERFORMANCE AS MIXED

Tensile Strength	N/mm²	68
	(psi)	(10,000)
Compressive Strength	N/mm²	155
	(psi)	(22,500)
Flexural Strength	N/mm²	121
	(psi)	(17,500)

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:

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