Technical Data Sheet

LOCTITE STYCAST US 1150

June 2018

PRODUCT DESCRIPTION

LOCTITE STYCAST US 1150 provides the following product characteristics:

Technology	Urethane
Appearance - Part A	Brown
Appearance - Part B	Black
Appearance (cured)	Black
Components	Two components - requires mixing
Mix Ratio, by volume - Part A: Part B	1 : 4
Mix Ratio, by weight - Part A: Part B	21 : 100
Cure	Room temperature cure
Application	Potting and Encapsulating

LOCTITE STYCAST US 1150 is an extended polybutadiene/MDI base, mineral filled, medium hardness, ambient cure urethane encapsulant/sealant. This material can be used for potting electronics or devices for protection against environmental hazards. It exhibits very little hardness increase when cooled to -75ºC. It can be used for devices in the telecommunications and automotive industries. LOCTITE STYCAST US 1150 meets UL 94V-0 rating. The 1 to 4 volume mix ratio makes meter-mix dispensing convenient.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Density, 25 °C, g/cm³	1.21
Viscosity, Brookfield - RVF, 25 °C, cP:	
Spindle 2, speed 20 rpm	90

Part B Properties

Density, 25 °C, g/cm³	1.46
Viscosity, Brookfield - RVF, 25 °C, cP:	
Spindle 2, speed 20 rpm	13,000

Mixed Properties

Density, 25 °C, g/cm³	1.44
Viscosity, Brookfield - RVF, 25 °C, cP:	
Spindle 2, speed 20 rpm	3,500
Working Time, 140 g mass, , minutes	60

TYPICAL CURING PERFORMANCE

Gel Time

140 gm mass, 90 to 120 minutes @ 25°C

Recommended Cure

24 to 48 hours @ 25°C

Alternative Cure Schedule

2 to 4 @ 60 to 85°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

Shore Hardness , Durometer A	60
24 Hour Water Moisture Absorption, %	<0.2
Glass Transition Temperature, °C	-60
Coefficient of Linear Thermal Expansion, ppm/ºC:	
Alpha 1, @ -20 to 0 °C	140
Alpha 2, @ 10 to 50 °C	158
Linear Shrinkage, ASTM D792, %	<1.0
Coefficient of Thermal Conductivity, W/(m-K)	0.486

Electrical Properties

Volume Resistivity , ohm-cm:	
@ 25 °C	2.96×10^{13}
@ 85 °C	5.32×10^{11}
Surface Resistivity, ohms:	
@ 25 °C	3.02×10^{14}
@ 85 °C	4.27×10^{12}
Dielectric Strength, 20 mil thickness, volts/mil	950
Dielectric Constant / Dissipation Factor:	
@ 25 °C:	
@ 100 Hz	4.89/0.05
@ 1 KHz	5.33/0.07
@ 85 °C:	
@ 100 Hz	4.91/0.06
@ 1 KHz	5.16/0.03

GENERAL INFORMATION

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

DIRECTIONS FOR USE

Certain resins and hardeners are prone to crystallization. If crystallization does occur, warm the contents of the shipping container to 50 to 60ºC until all crystals have dissolved. Shipping container must be loosely covered during the warming stage to prevent any pressure build-up.

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.

Note: Before using this product please purge approximately 30 ml. of material prior to application. Discard purged material in accordance with the Material Safety Data Sheet. A video instruction is available

upon request.

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
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

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