



LOCTITE® STYCAST US 8000

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PRODUCT DESCRIPTION

LOCTITE® STYCAST US 8000 provides the following product characteristics:

Technology	Polyurethane
Appearance, Resin (Component A)	Dark grey
Appearance, Hardener (Component B)	Amber
Mixing ratio,by weight comp. A : comp. B	100 : 27,5
Mixing ratio, by volume comp. A : comp. B	100 : 25,5
Product benefits	<ul style="list-style-type: none">• Good self levelling properties• Low ionic content to reduce Ag migration• UL RTI rating of 140°C• UL 94 V0 rating
Cure	Room temperature cure or heat cure
Application	Potting and encapsulating
Typical assembly applications	Transformers, PCB's and other insulating applications
Operating temperature, °C	-40 to +140

LOCTITE® STYCAST US 8000 is a flame retardant, flexible, low viscous polyurethane encapsulant, with excellent self levelling properties and a very good adhesion to different substrates. The potting compound can withstand high temperatures without degrading and the low ionic content level prevents silver migration and reduce the risk of short circuits and device failures of your electronics.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A properties

Density @ 25°C, g/ml	1.14
Viscosity Brookfield – RVT @ 25°C, (mPa.s/cP)	8,000 - 14,000
Shelf life @ 18 - 25°C, months	6

Part B properties

Density @ 25°C, g/ml	1.23
Viscosity Brookfield – RVT @ 25°C, (mPa.s/cP)	200 - 400
Shelf life @ 18 - 25°C, months	6

Mixed properties

Density @ 23°C, g/ml	1.16
Viscosity Brookfield – RVT @ 23°C, (mPa.s/cP)	
Brookfield RVT	3,800 - 5,800
TP-Ag method, 15 s ⁻¹	6,400
Pot life @ 25°C, minutes	
Viscosity increase up to 10 Pa.s	10
Viscosity increase up to 100 Pa.s	25

TYPICAL CURING PERFORMANCE AS MIXED

Recommended cure schedule

48 hours @ 25°C
2 hours @ 60°C
30 minutes @ 85°C

Complete cure will be obtained after 2 weeks at 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

Physical properties

Hardness, Shore A	89
Glass transition temperature by TMA, °C	-5
Coefficient of thermal expansion, ppm/°C:	
Above Tg	196
Thermal conductivity, W/m-K	0.3
Extractable ionic content, ppm	
Chloride (Cl-)	<10
Sodium (Na+)	<20
Calcium (Ca ²⁺)	<20
Moisture absorption, %	
@ 25°C, 1000 hours	0.6
@ 85°C/85% RH, 1000 hours	0.4
Elongation, %	87
Tensile lap shear strength @ 25°C	N/mm ² 8.7 (psi) 1,262
Tensile strength @ 25°C	N/mm ² 9.0 (psi) 1,305



Electrical properties

Volume resistivity, ohms-cm	3x10 ¹⁵
Surface resistivity, ohms	9x10 ¹⁶
Dielectric strength, kV/mm	24
Dielectric constant / Dissipation factor	
@ 50 Hz	5.5 / 0.55
@ 1 kHz	4.2 / 0.14
@ 1 MHz	3.5 / 0.11

GENERAL INFORMATION

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

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

Optimal storage: 18 to 25°C

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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 Henkel 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 the specifications of this product.

Conversions

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

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Reference 1

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