

LOCTITE STYCAST US 5522

May 2020

PRODUCT DESCRIPTION

LOCTITE STYCAST US 5522 provides the following product characteristics:

Technology	Urethane
Components	Two components - requires mixing
Appearance - Mixed	Black
Mix Ratio by weight: Part A: Part B	8 : 100
Mix Ratio by volume: Part A: Part B	9.55 : 100
Product Benefits	<ul style="list-style-type: none"> • Flexible • Excellent thermal cycle performance • Excellent electrical properties • Extended working life
Cure	Room temperature and Oven Cure
Application	Encapsulation and Potting

LOCTITE STYCAST US 5522 flexible, flame retardant potting compound is designed for indoor and outdoor electronic devices, as well as, general potting applications when protection from physical shocks is important.

LOCTITE STYCAST US 5522 meets UL 94 V-0 Flammability rating.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Density, g/cc	1.45
Viscosity @ 25 °C, mPa·s (cP)	7,000
Working Time (145 g mass) @ 25 °C, hours	4 to 8
Gel Time (145 g mass) @ 85 °C, minutes	50 to 60
Shelf Life @ 8 to 28 °C (from date of manufacture), days	365
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

10 to 14 days @ 25 °C

Oven Cure

16 to 24 hours @ 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

Hardness, Shore A	82
Moisture Absorption, 24 hrs immersion, %	0.01
Weight Loss @ 168 hours, %:	
@ 105 °C	0.05
@ 125 °C	0.08
Linear Shrinkage, %	0.005
Elongation, %	65
Flammability @ 12.32 mm, UL94	V-0

Electrical Properties

Dielectric Constant / Dissipation Factor @ 100 kHz:	
@ 25 °C	5.5/0.038
@ 100 °C	6.0/0.04
Dielectric Strength, 125 mil thickness, volts/mil	943
Volume Resistivity, ohm-cm	1×10 ¹²
Surface Resistivity, ohm	3.1×10 ¹³

TYPICAL PERFORMANCE OF CURED MATERIAL

Tensile Strength	N/mm ²	2.76
	(psi)	(400)

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.

DIRECTIONS FOR USE

1. Some settling of fillers and pigments will occur with time. Therefore, thorough mixing of components containing fillers or pigments is necessary prior to every withdrawal of material.
2. Weigh needed quantities together and mix until homogeneous. Mixing takes 1 to 4 minutes depending on material quantity and viscosity.
3. Try to choose a mixing container that will be ½ to ¾ full of material. This minimizes inclusion of bubbles into the mix.
4. Use spatulas or mixing paddles appropriate to container size. Scrape the sides and bottom of the container while mixing.
5. If a bubble free product is desired, it may be necessary to

vacuum de-air the separated components and/or the mixture. Vacuum pressure should be 1 mmHg or less to be effective.

6. Once opened, blanket the remaining product with dry nitrogen or dry air.
7. Reseal containers tightly and store in cool, dry conditions.
8. Blanket and reseal containers immediately after each use. This protects the remaining material from moisture contamination.
9. Use a drying tube on the ventilation opening of drums. Never store chemical containers exposed to weather or direct sunlight.

STORAGE:

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

Optimal Storage : 8 to 28 °C

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

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

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.

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