

LOCTITE STYCAST US 2650

September 2012

PRODUCT DESCRIPTION

LOCTITE STYCAST US 2650 provides the following product characteristics:

Technology	Urethane
Appearance, Resin (Component A)	Amber
Appearance, Hardener (Component B)	white
Appearance (cured)	Tan
Components	Two component - requires mixing
Mix Ratio, by volume - Part A: Part B	1 : 4
Mixing Ratio, by weight Component A: Component B	21.1 : 100
Cure	Room temperature cure
Application	Potting and Encapsulating

LOCTITE STYCAST US 2650 is an inexpensive, low viscosity, flexible, flame retardant, castor oil/MDI based urethane potting/encapsulating compound. This material was designed for potting indoor and outdoor telephone connector blocks. It is suitable for potting and encapsulating other electronic or electrical devices or assemblies. LOCTITE STYCAST US 2650 exhibits exceptional adhesion to thermoplastic and thermoset materials including ABS. This material can be utilized in a variety of applications due to its good thermal conductivity and flame retardancy.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Density, 25 °C, g/cm ³	1.24
Viscosity, Brookfield - RVF, cP: Spindle 2, speed 20 rpm	200

Part B Properties

Density, 25 °C, g/cm ³	1.47
Viscosity, Brookfield - RVF, cP: Spindle 4, speed 12 rpm	7,500

Mixed Properties

Density, 25 °C, g/cm ³	1.38
Drystick Gel, 300 gm mass, minutes	15 to 30
Working Time, 300 gm mass, minutes	5 to 10
Pot Life, 300 gm mass, @ 23 °C, minutes	19.5
Viscosity, Brookfield - RVF, cP: Spindle 6, speed 10 rpm	3,500

TYPICAL CURING PERFORMANCE

Recommended Curing Conditions

- 16 hours @ 25 °C (Recommended cure)
- 1 to 3 hours @ 60 to 85 °C (Alternate cure)

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties :

Shore Hardness , Durometer A	83
24 Hour Water Moisture Absorption, %	0.01
Tensile Strength, psi	321
Elongation ,%	39
Glass Transition Temperature, °C	0
Coefficient of Thermal Expansion, ppm/°C: Below Tg (-40 to -20 °C)	109
Above Tg (20 to 40°C)	153
Coefficient of Thermal Conductivity, W/(m-K)	0.47
Weight Loss after 168hrs @ 125°C, %	1.96

Electrical Properties:

Dielectric Strength, 20 mil thickness, volts/mil	941.8
Surface Resistivity, ohms @ 25°C	8.5×10 ¹³
Volume Resistivity, ohm-cm	1.05×10 ¹⁴
Dielectric Constant / Dissipation Factor @ 25°C:	
100 Hz	6.854 / 0.09
1 kHz	5.956 / 0.1277
100 kHz	4.198 / 0.084

GENERAL INFORMATION

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

Directions for use

- LOCTITE STYCAST US 2650 will settle upon storage, especially at temperatures exceeding 27 °C. Refrigerated storage will minimize filler settling. Each container must be thoroughly mixed before combining Part A and Part B. For ease of mixing, store containers upside down. After warming to room temperature, approximately 10 minutes on a standard paint shaker will normally ensure complete dispersion of the filler.

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

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

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.

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