

LOCTITE STYCAST US 5500

November 2016

PRODUCT DESCRIPTION

LOCTITE STYCAST US 5500 provides the following product characteristics:

Technology	Urethane
Appearance, Resin (Component A)	Clear brown
Appearance, Hardener (Component B)	Clear white
Appearance (cured)	Clear amber
Components	Two components - requires mixing
Mix Ratio, by volume - Part A: Part B	1 : 1
Mixing Ratio, by weight Component A: Component B	52.3 : 47.7
Cure	Room temperature cure
Application	Potting and Encapsulating

LOCTITE STYCAST US 5500 is an unfilled, low viscosity, reenterable potting and encapsulation compound. It is a mix ratio friendly system. It can be used to encapsulate electronics for automotive applications including under-the-hood. The low glass transition temperature means that sensitive components are not damaged during low temperature exposure.

REGULATORY NOTICE: This product is regulated by the United States Department of Commerce and may not be exported without license from that Organization. See Material Safety Data Sheet for details.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Viscosity @ 23 °C, cps	130
Density @ 23°C, gm/cc	1.0

Part B Properties

Viscosity @ 23 °C, cps	3,200
Density @ 23°C, gm/cc	0.92

Mixed Properties

Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP):	
Spindle 2, speed 20 rpm	1,000
Density @ 23°C, gm/cc	0.97
Working Time, 100 gm mass, @ 23 °C, minutes	10
Gel Time, 100gm mass @ 23 °C, minutes	25

TYPICAL CURING PERFORMANCE

Recommended Curing Conditions

16 hours @ 23°C

Alternative Curing Conditions

5 to 15 minutes @ 65 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 :

Coefficient of Thermal Expansion , ppm/°C:	
Above Tg	197
Glass Transition Temperature (Tg), °C	-60
Hardness, Shore A	15
Hardness, Shore OO	60
Weight Loss after 168hrs @ 105°C, %	0.47
24 Hour Water Moisture Absorption, %	0.22

Electrical Properties:

Dielectric Strength, 0.02" thickness, volts/mil	1,050
Dielectric Constant / Dissipation Factor @ 23°C:	
1 kHz	4.7 / 0.009
100 kHz	4.5 / 0.022
Volume Resistivity, ohms-cm	5.3×10^{11}
Surface Resistivity, ohms	4.3×10^{12}

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

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{psi} \times 145 = \text{N/mm}^2$

$\text{MPa} = \text{N/mm}^2$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

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