

LOCTITE STYCAST US 5005

May 2020

PRODUCT DESCRIPTION

LOCTITE STYCAST US 5005 provides the following product characteristics:

Technology	Polyurethane
Components	Two components - requires mixing
Appearance - Part A	Brown
Appearance - Part B	Black
Appearance - Mixed	Black
Mix Ratio by weight: Part A: Part B	10 : 100
Mix Ratio by volume: Part A: Part B	1 : 8.4
Product Benefits	- Flexible - Hydrolytic stability
Cure	Room temperature and Heat cure
Application	Encapsulation and Potting

LOCTITE STYCAST US 5005 is a polyurethane designed for potting stress sensitive components. It features excellent hydrolytic stability and maintains outstanding electrical properties up to 150°C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Viscosity @ 25 °C, mPa·s (cP)	80
Density, g/cc	1.24
Flash Point - See SDS	

Part B Properties

Viscosity @ 25 °C, mPa·s (cP)	25,000
Density, g/cc	1.46
Flash Point - See SDS	

Mixed Properties

Mixed Viscosity @ 25°C, mPa·s (cP)	9,000
Density, g/cc	1.44
Working Time (200 g mass) @ 25 °C, minutes	60
Gel Time (200 g mass) @ 25 °C, hours	2 to 2.5
Shelf Life @ 8 to 28°C (from date of manufacture), days	180

Flash Point - See SDS

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

48 hours @ 25°C

Alternate Cure Schedule

4 to 5 hours @ 66°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	83
Glass Transition Temperature (Tg), °C,	-54
Coefficient of Linear Thermal Expansion, in/in/°F x 4.5 10 ⁻⁵	
Thermal Conductivity, W/(m·K)	0.44

Electrical Properties

Dielectric Constant / Dissipation Factor @ 25°C:	
@ 100 Hz	4.6/0.03
@ 1 kHz	4.6/0.03
@ 10 kHz	4.4/0.04
@ 100 kHz	4.1/0.04
Dielectric Strength, volts/mil	950
Breakdown voltage, kV	18.1
Arc Resistance, seconds	125
Volume Resistivity, ohm-cm, 10 ¹⁴	1.0
Surface Resistivity, ohms, 10 ¹⁵	2.6

GENERAL INFORMATION

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

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected with a sealant for chlorine or other strong oxidizing materials.

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 8 to 28°C or below, in closed containers. If stored below 23°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

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

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