

LOCTITE STYCAST ES 0500LC

September 2020

PRODUCT DESCRIPTION

LOCTITE STYCAST ES 0500LC provides the following product characteristics:

Technology	Epoxy
Appearance, Resin (Part A)	Tan
Appearance, Hardener (Part B)	Amber
Appearance (cured)	Tan
Components	Two components - requires mixing
Mix Ratio by volume: Part A: Part B	100 : 66.5
Mix Ratio by weight: Part A: Part B	100 : 43.2
Cure	Heat cure
Application	Vacuum Impregnation

LOCTITE STYCAST ES 0500LC is a two-component, filled epoxy system developed for vacuum impregnation applications as well as for general potting and encapsulating. It is especially designed for electrical coils.

TYPICAL PROPERTIES OF UNCURED MATERIAL**Part A Properties**

Density, @ 25°C, g/cm ³	1.71
Solids Content, %	100
Filler Content, %	57
Viscosity @ 25 °C, mPa·s (cP): Spindle 7, speed 4 rpm	123,000

Part B Properties

Density, @ 25°C, g/cm ³	1.11
Solids Content, %	100
Filler Content, %	0
Viscosity @ 25 °C, mPa·s (cP): Spindle 1, speed 20 rpm	1,000

Mixed Properties

Specific Gravity @ 25°C	1.46
Filler Content %	40
Mixed Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP): Spindle 5, speed 20 rpm	7,200
Pot Life @ 25°C, 200 gram mass, hours	>8
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE**Gel Time**

Gel Time @ 100 °C, Sunshine instrmnt, minutes 55

Recommended Cure Schedule

2 hours @ 93°C plus 3 hours @ 150°C

Alternate Cure Schedule

2 hours @ 125°C plus 1 hour @ 150°C

The above cure profile is a guideline recommendation. These cure conditions (time and temperature) may vary based on customers' experience and specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL**Physical Properties**

Shore Hardness, Durometer D	91
Tg, °C by TMA	84
Coefficient of Thermal Expansion :	
Alpha 1 (um/m°C)	61.1
Alpha 2 (um/m°C)	160.0
Linear Shrinkage, %	0.82
Tensile Strength, psi	5,580
Tensile Elongation, %	1.41

Electrical Properties

Volume Resistivity, ohm-cm:	
@ 23°C	1×10 ¹⁶
@ 125°C	7×10 ¹²
Dielectric Strength, 20 mil thickness, volts/mil	1,360
Dielectric Constant / Dissipation Factor:	
@ 1 kHz:	
@ 23 °C	3.5/0.0074
@ 125 °C	5.1/0.0799
@ 10 kHz:	
@ 23 °C	3.5/0.0062
@ 125 °C	4.6/0.0655

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 Henkel 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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