

LOCTITE STYCAST ES 1902

November 2016

PRODUCT DESCRIPTION

LOCTITE STYCAST ES 1902 provides the following product characteristics:

Technology	Epoxy
Appearance (cured)	Water white
Components	Two components - requires mixing
Mix Ratio, by volume - Part A: Part B	2 : 1
Mixing Ratio, by weight Component A: Component B	100 : 41.7
Cure	Room temperature cure
Application	Potting and Encapsulating

LOCTITE STYCAST ES 1902 UV epoxy is a transparent, low viscosity epoxy resin formulation recommended for potting and laminating applications where low color and excellent electrical and mechanical properties are required. This two-part adhesive exhibits a fast UV gelation, a room temperature cure and develops strong, low shrinkage, bonds to most metals and many rigid plastics. It has excellent dimensional stability over a wide temperature range.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Color	Water white
Solids Content, %	100
Filler Content, %	0
Density, @ 25 °C, g/cm ³	1.15
Viscosity, Brookfield - RVF, 25 °C, cP:	
Spindle 4, speed 20 rpm	4,700

Part B Properties

Color	Light Amber
Solids Content, %	100
Filler Content, %	0
Density, @ 25 °C, g/cm ³	0.96
Viscosity, Brookfield - RVF, 25 °C, cP:	
Spindle 1, speed 20 rpm	50

Mixed Properties

Pot Life @ 25 °C, minutes:	
100 g mass	60 to 90
UV Gel Time, 1/16" to 1/8" thickness, seconds	10
UV Intensity, mw/cm ²	200
UV Spectral Output, nanometers	375
UV Optimum Wavelength, nanometers	300 to 500
Specific Gravity	1.09
Viscosity, Brookfield - RVF, 25 °C, cP:	
Spindle 2, speed 20 rpm	290

TYPICAL CURING PERFORMANCE

Recommended Curing Conditions

24 hours @ 25 °C (Recommended cure)
2 hours @ 60 °C (Alternate cure)

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties :

Coefficient of Thermal Expansion, ppm/°C:	
Alpha 1, Below Tg	68
Alpha 2, Above Tg	199
Glass Transition Temperature, °C	44
Linear Shrinkage, %	1.3
Shore Hardness , Durometer D	80
Tensile Strength, psi	7,900
Tensile Elongation, %	3.7
Flexural Strength, psi	10,000
Operating temperature range, °C	-40 to 125

Electrical Properties:

Dielectric Strength, 10 mil thickness, volts/mil	1,390
Volume Resistivity, ohm-cm	1.27×10 ¹⁶
Volume Resistivity, ohm/cm @ 125°C	2.3×10 ¹³
Surface Resistivity, ohms @ 25°C	6.6×10 ¹⁵
Dielectric Constant / Dissipation Factor @ °C:	
1 kHz	3.8 / 0.008

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.

Note: Before using this product please purge approximately 30 ml. of material prior to application. Discard purged material in accordance with the Material Safety Data Sheet. A video instruction is available upon request.

STORAGE:

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

Optimal Storage: 20 °C to 30 °C. Storage below 20 °C or greater than 30 °C can adversely affect product properties.

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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