

LOCTITE STYCAST ES 0513

November 2014

PRODUCT DESCRIPTION

LOCTITE STYCAST ES 0513 provides the following product characteristics:

Technology	Epoxy
Appearance - Part A	Gray
Appearance - Part B	Black
Appearance (Mixed)	Black
Components	Two components - requires mixing
Mix Ratio, by volume - Part A: Part B	98.4 : 100
Cure	Heat cure
Mixing Ratio, by weight Component A: Component B	100 : 99.9
Application	Potting and Encapsulating

LOCTITE STYCAST ES 0513 is a two-component, filled epoxy system designed for vacuum impregnation applications as well as for general potting and encapsulating.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Density, gm/cc	1.77
Solids Content, %	100
Filler Content, %	63
Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP): Spindle 7, speed 10 rpm	215,000
Shelf Life @ 25°C (from date of manufacture), days	365

Part B Properties

Density, gm/cc	1.74
Solids Content, %	100
Filler Content, %	63
Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP): Spindle 5, speed 4 rpm	30,000
Shelf Life @ 25°C (from date of manufacture), days	365

TYPICAL CURING PERFORMANCE

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 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

Linear Shrinkage, %	0.66
Density, gm/cc	1.79
Specific Gravity	1.76
Shore Hardness, Shore D	90
Tensile Modulus	N/mm ² 6,550 (psi) (950,000)
Elongation, %	1.5
Glass Transition Temperature (T _g) by TMA, °C	88
Coefficient of Thermal Expansion	

Electrical Properties

Dielectric Strength, 20 mil thickness, volts/mil	1,215
Dielectric Constant / Dissipation Factor @ 23°C: 1kHz	3.8 / 0.0043
10 kHz	3.8 / 0.0046
Dielectric Constant / Dissipation Factor @ 125°C: 1kHz	5.3 / 0.0609
10 kHz	4.8 / 0.0604
Volume Resistivity, ohm-cm @ 23°C	2.5×10 ¹⁶
Volume Resistivity, ohm-cm @ 125°C	5.57×10 ¹³

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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Reference **N/A**