

# LOCTITE STYCAST ES 0633

November 2016

**PRODUCT DESCRIPTION**

LOCTITE STYCAST ES 0633 provides the following product characteristics:

<b>Technology</b>	Epoxy
Appearance, Resin (Component A)	Black
Appearance, Hardener (Component B)	Amber
Appearance (cured)	Black
Components	Two components - requires mixing
Mix Ratio, by volume - Part A: Part B	100 : 18
Mixing Ratio, by weight Component A: Component B	100 : 12
<b>Cure</b>	Heat cure
<b>Application</b>	Potting and Encapsulating

LOCTITE STYCAST ES 0633 is a filled two-component liquid epoxy casting system designed for the casting and encapsulation of various electrical or electronic devices. LOCTITE STYCAST ES 0633 is especially recommended for use on components designed to operate at high temperatures.

LOCTITE STYCAST ES 0633 meets 94V-0 rating in 6.0mm cross section, file number E34947.

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

Specific Gravity, gm/cc	1.6
Filler Content, %	56
Viscosity @ °C, Brookfield RVF, cP, max.:	
Spindle 5, speed 4 rpm	43,900

**Part B Properties**

Specific Gravity, gm/cc	1.07
Filler Content, %	0
Viscosity @ °C, Brookfield RVF, cP, max.:	
Spindle 5, speed 10 rpm	3,200

**Mixed Properties**

Pot Life, 200 gm mass 25 °C, minutes	42
Viscosity, Brookfield - RVF, 25 °C, cps:	
Spindle 5, speed 4 rpm	18,700

**TYPICAL CURING PERFORMANCE 2 hours @ 60°C Normal**

Cure

24 hours @ 25 °C Alternate Cure

**TYPICAL PROPERTIES OF CURED MATERIAL****Physical Properties :**

Operating temperature range, °C	-55 to +180
Shore Hardness , Durometer D	90
Shrinkage, %	0.8
Tensile Strength, psi	3,500
Tensile Modulus, Kpsi	489
Elongation, %	1.2
Flexural Strength, psi	10,000
Flexural Modulus, Mpsi	0.96
Compressive Strength, psi	13,100
Flammability, 6.35mm, 94V-0	Meets requirement
Thermal Conductivity , W/(m-K)	0.65
Tg, °C by TMA	44.4
Coefficient of Thermal Expansion :	
Alpha 1, ppm	39.9
Alpha 2, ppm	147.8

**Electrical Properties:**

Arc Resistance, seconds	152
Dielectric Strength, volts/mil	951
Dielectric Constant / Dissipation Factor @ 25°C:	
100 Hz	5.4 / 0.04
1 kHz	5.2 / 0.03
10 kHz	5.0 / 0.02
Dielectric Constant / Dissipation Factor @ 100°C:	
100 Hz	14.2 / 0.87
1 kHz	8.4 / 0.23
10 kHz	7.7 / 0.07
Volume Resistivity, ohm-cm	1.11×10 <sup>15</sup>
Volume Resistivity, ohm/cm @ 100°C	2.45×10 <sup>11</sup>
Surface Resistivity, ohms @ 25°C	3.11×10 <sup>15</sup>
Surface Resistivity, ohms @ 100°C	2.92×10 <sup>11</sup>

**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**

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

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

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

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

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

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

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

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

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

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

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

**Disclaimer****Note:**

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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Reference 2

# Mouser Electronics

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