

LOCTITE STYCAST ES 2502 Parts AB

September 2012

PRODUCT DESCRIPTION

LOCTITE STYCAST ES 2502 Parts AB provides the following product characteristics:

Technology	Epoxy
Appearance, Resin (Component A)	Black
Appearance, Hardener (Component B)	Off-white
Appearance (cured)	Black
Components	Two component - requires mixing
Mix Ratio, by volume - Part A: Part B	1 : 1
Mixing Ratio, by weight Component A: Component B	100 : 95
Cure	Heat cure
Application	Potting and Encapsulating

LOCTITE STYCAST ES 2502 Parts AB is a two component heat cured casting system designed for the insulation of various types of transformers. It is particularly suited for very high voltage arc or corona sensitive applications. LOCTITE STYCAST ES 2502 Parts AB is suitable for bulk castings applications.

LOCTITE STYCAST ES 2502 Parts AB meets UL 94 HB Flame Retardant to 3.175mm thickness.

LOCTITE STYCAST ES 2502 Parts AB meets UL 94 V-0 Flammability at 6.35mm thickness.

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

Density, @ 25 °C, g/cm ³	1.71
Filler Content, %	61
Viscosity, Brookfield - RVF, cP:	
Spindle 7., speed 10 rpm, @ 25°C	370,000
Spindle 3, speed 10 rpm, @ 80°C	7,000

Part B Properties

Density, @ 25 °C, g/cm ³	1.61
Filler Content, %	63
Viscosity, Brookfield - RVF, cP:	
Spindle 7., speed 10 rpm, @ 25°C	15,500
Spindle 4, speed 10 rpm, @ 60°C	3,000

Mixed Properties

Viscosity, Brookfield - RVF, 25 °C, cP:	
Spindle 7., speed 20 rpm	57,000
Pot Life, 200 gm mass, @ 25 °C, hours	20
Peak Exotherm, 200 gm mass, @ 80 °C, °C	90
Gel Time @ 125 °C, minutes	30

TYPICAL CURING PERFORMANCE**Recommended Curing Conditions**

3 hours @ 80 °C (Recommended cure)

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

Coefficient of Linear Thermal Expansion, ppm/°C:	
Alpha 1, @ -40 to 20 °C	41
Alpha 2, @ 40 to 60 °C	128
Glass Transition Temperature, °C	4
Compressive Strength, psi	8,800
Linear Shrinkage, %	0.53
Shore Hardness, Durometer D	75
Tensile Strength, psi	1,350
Tensile Elongation, %	26
Specific Gravity @ 25 °C	1.72
Thermal Conductivity, W/(m-K)	0.75
Flexural Strength, psi	1,020
24 Hour Water Moisture Absorption, %	0.23

Electrical Properties:

Dielectric Strength, 10 mil thickness, volts/mil	1,280
Arc Resistance, seconds	220
Volume Resistivity, ohm-cm	4×10 ¹⁴
Volume Resistivity, ohm-cm @ 105°C	3×10 ¹²
Surface Resistivity, ohms @ 25°C	2×10 ¹⁵
Surface Resistivity, ohms @ 105°C	3×10 ¹²
Dielectric Constant / Dissipation Factor @ 25°C:	
100 Hz	6.0 / 0.06
1 kHz	5.6 / 0.048
10 kHz	5.4 / 0.042
100 kHz	5.2 / 0.037
Dielectric Constant / Dissipation Factor @ 105°C:	
100 Hz	7.1 / 0.054
1 kHz	6.7 / 0.032
10 kHz	6.5 / 0.017
100 kHz	6.5 / 0.029

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.

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 1.1