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LOCTITE

Technical Data Sheet

LOCTITE STYCAST U 2500

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PRODUCT DESCRIPTION

LOCTITE STYCAST U 2500 provides the following product characteristics:

Technology	Polyurethane
Appearance (Resin)	Black
Appearance (Hardener)	Amber
Components	Two component - requires mixing
Mix Ratio, by weight - Resin : Hardener	100 : 7
Mix Ratio, by volume - Base : Hardener	100 : 8.5
Product Benefits	• Low viscosity • Low CTE • Two component • Flexible polyurethane • Excellent wettability • Room temperature cure
Cure	Room temperature cure
Application	Encapsulant
Operating Temperature	-40 to 125 °C

LOCTITE STYCAST U 2500 is an encapsulant designed for transformer, PCB's and other insulation applications. It allows for complete impregnation when used either on small slightly wound coils or large castings.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Viscosity @ 25 °C, mPa·s (cP)	12,500
Density, g/cm³	1.5
Shelf Life @ 18 to 25°C, months	6
Flash Point - See SDS	

Part B Properties

Viscosity @ 25 °C, mPa·s (cP)	50
Density, g/cm³	1.25
Flash Point - See SDS	

Mixed Properties

Mixed Viscosity @ 25°C, mPa·s (cP)	6,000
Pot Life @ 25 °C, hours	2
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

24 hours @ 25°C or
4 hours @ 60°C

Complete cure at room temperature will be obtained after 2 to 3days.

A post cure of 2 hours @ 100 to 120°C will improve final end-properties.

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

Hardness, Shore A:		
@ 25ºC		73
@ -20ºC		78
Coefficient of Linear Thermal Expansion, ppm/ºC		155
Glass Transition Temperature, °C		-53
Young's Modulus	N/mm² (psi)	6 (870)
Elongation, %		82
Thermal Conductivity, W/(m-K)		0.5
Moisture Absorption, 24 hrs @ 25ºC, %		0.75

Electrical Properties

Volume resistivity @ 500 V, Ω-cm	4×10^{11}
Surface Resistivity, ohms	7×10^{12}
Dielectric Strength, ASTM D149, kV/mm	15
Dielectric Constant/Dissipation Factor @ 1 MHz	5.5/0.05

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous:

Tensile Strength	N/mm² (psi)	3 (435)
Tensile Lap Shear Strength:		
Al to Al	N/mm² (psi)	6 (870)

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet, (SDS).

DIRECTIONS FOR USE

1. Before use, stir Part A to make it homogeneous.
2. Accurately weigh Part A and Part B into a clean container in the recommended ratio.
3. Mix thoroughly, degas and fill the casting.

Storage

This material is moisture sensitive and must be stored in tightly closed containers at the recommended storage temperature. Partially used containers should be blanketed with dry nitrogen before resealing.

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

Optimal Storage : 18 to 25 °C

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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.

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.

Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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Reference N/A