Technical Data Sheet

LOCTITE STYCAST 5952-1

November 2016

PRODUCT DESCRIPTION

LOCTITE STYCAST 5952-1 provides the following product characteristics:

Technology	Silicone
Components	Two components - requires mixing
Appearance - Part A	Red
Appearance - Part B	White
Mix Ratio, Part A:Part B	1 : 1
Product Benefits	• Electrically non-conductive • Good elongation strength • Moderate tear strength • High thermal conductivity
Cure	Heat cure
Application	Potting or Encapsulant
Typical Assembly Applications	Transformers, Rectifiers, Thyristors, Power supplies and Heat generating modules
Other Application Areas	Thermally conductive roll coatings, Heat sinks and Thermal pads

LOCTITE STYCAST 5952-1 is designed for encapsulation of heat generating devices. It is also recommended for applications requiring a non-corrosive casting and coating.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Viscosity @ 25 °C, mPa·s (cP)	60,000
Density, g/cm³	2.05
Storage Life @ 18 to 25°C (from date of manufacture), days	183
Flash Point - See SDS	

Part B Properties

Viscosity @ 25 °C, mPa·s (cP)	25,000
Density, g/cm³	2.125
Storage Life @ 18 to 25°C (from date of manufacture), days	183
Flash Point - See SDS	

Mixed Properties

Mixed Viscosity @ 25°C, mPa·s (cP)	30,000
Density, g/cm³	2.05
Mixed Pot Life @ 100 °C, minutes	100
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

1 hour @ 100°C

LOCTITE STYCAST 5952-1 may be cured over a broad range of temperatures. After 24 hours at room temperature, it will be hard enough to handle. Optimum properties will be achieved after 7days.

LOCTITE STYCAST 5952-1 can be cured rapidly at elevated temperatures, even in thick sections.

For optimum performance, follow the initial cure with a post cure of 2 hours at 175ºC.

Cure may be inhibited through contact with certain contaminants. Common materials which should be avoided include sulfur, sulfur containing materials, nitrogen containing materials, RTV silicone catalysts and heavy metal salts. Molds, mixing equipment, ovens and other apparatus used in the preparation and curing of LOCTITE STYCAST 5952-1 should be free of inhibiting contaminants.

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	75
Coefficient of Linear Thermal Expansion, 10^{-4} K^{-1}	2
Elongation, %	45
Thermal Conductivity , W/(m-K)	0.8

Electrical Properties

Volume Resistivity @ 25ºC, ohm-cm	1×10^{14}
Dielectric Constant / Loss@ 1 MHz	5.0/0.01
Dielectric Strength , ASTM D149, kV/mm	17

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous:

Tensile Strength	N/mm² (psi)	4 (580)

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Mix thoroughly.
2. Power mixing is preferred to ensure a homogeneous product.
3. Evacuate the resin mixture to remove entrapped air.
4. Pour mixture into cavity or mold.
5. PRIMER S 11NC is recommended for use with LOCTITE STYCAST 5952-1 to improve adhesion to non-silicone materials and to minimize the probability of cure inhibition from surface contaminants on non-silicone substrates.

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 in original, tightly covered containers in clean, dry areas. Storage information may be indicated on the product container labeling.

Optimal Storage: 25°C. Storage below 25°C or greater than 25°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
(°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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Note:
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