

# LOCTITE STYCAST US 5528

April 2020

## PRODUCT DESCRIPTION

LOCTITE STYCAST US 5528 provides the following product characteristics:

|  |   |
|--|---|
| <b>Technology</b>                      | Urethane  |
| Appearance (cured)                     | White   |
| Components                             | Two components - requires mixing  |
| Mix Ratio by weight:<br>Part A: Part B | 15 : 85   |
| Mix Ratio by volume:<br>Part A: Part B | 1 : 4.81  |
| <b>Cure</b>                            | Room temperature cure   |
| <b>Application</b>                     | Encapsulating and Potting   |
| <b>Application Areas</b>               | <ul style="list-style-type: none"> <li>indoor/outdoor telecommunications equipment</li> <li>circuit boards</li> <li>ballast transformers</li> </ul> |

LOCTITE STYCAST US 5528 is a flexible, flame retardant, mineral filled, polyurethane compound. This potting compound has long pot life, and is low viscosity so it flows well and adheres well to many substrates. It has very low odor and does not contain TDI or mercury compounds.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

### Part A Properties

|                        |      |
|------------------------|------|
| Density, g/cc          | 1.23 |
| Viscosity @ 25 °C, cps | 75   |
| Flash Point - See SDS  |      |

### Part B Properties

|                       |        |
|-----------------------|--------|
| Density, g/cc         | 1.46   |
| Viscosity @ 25 °C     | 11,000 |
| Flash Point - See SDS |        |

### Mixed Properties

|   |           |
|---|-----------|
| Density, g/cc                               | 1.4       |
| Viscosity @ 25 °C, cps                      | 2,000     |
| Working Time, 300 g mass, @ 25 °C, minutes  | 40 to 50  |
| Gel Time, 300 gm mass @ 25 °C, minutes      | 70 to 100 |
| Shelf Life (from date of manufacture), days | 365       |
| Flash Point - See SDS                       |           |

## TYPICAL CURING PERFORMANCE

### Recommended Cure

12 to 24 hours @ 25°C

## Alternate Cure

1 to 3 hours @ 65 to 85°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 :

|   |  |
|---|--|
| Hardness, Shore A   | 84                                     |
| Moisture Absorption @ 24 hours, %   | 0.15                                   |
| Weight Loss after 168 hrs @ 130 °C, %   | 0.19                                   |
| Coefficient of Thermal Conductivity,<br>Cal x cm/(sec x cm <sup>2</sup> x °C) | 16×10 <sup>-4</sup>                    |
| Linear Shrinkage, %   | 0.12                                   |
| Coefficient of Thermal Expansion, in/in/°C:<br>@ -40 to 25°C                  | 1.14×10 <sup>-4</sup>                  |
| @ 25 to 125°C   | 1.55×10 <sup>-4</sup>                  |
| Flammability, UL 94:  |  |
| @ 6.3 mm  | V-2                                    |
| @ 9.52 mm   | V-0                                    |
| Tensile Strength  | N/mm <sup>2</sup> 9.1<br>(psi) (1,320) |

### Electrical Properties:

|   |                      |
|---|----------------------|
| Dielectric Constant / Dissipation Factor @ 25°C:<br>100 kHz | 3.85 / 0.02          |
| Dielectric Strength, 100 mil thickness, volts/mil           | >400                 |
| Volume Resistivity, ohms-cm                                 | 3.6×10 <sup>13</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 8 to 28°C or below, in closed containers. If stored below 8 to 28°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**

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$   
 $\text{kV/mm} \times 25.4 = \text{V/mil}$   
 $\text{mm} / 25.4 = \text{inches}$   
 $\text{N} \times 0.225 = \text{lb/F}$   
 $\text{N/mm} \times 5.71 = \text{lb/in}$   
 $\text{psi} \times 145 = \text{N/mm}^2$   
 $\text{MPa} = \text{N/mm}^2$   
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$   
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$   
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$   
 $\text{mPa}\cdot\text{s} = \text{cP}$

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