

# LOCTITE STYCAST 2762FT

March 2016

## PRODUCT DESCRIPTION

LOCTITE STYCAST 2762FT provides the following product characteristics:

<b>Technology</b>	Epoxy
<b>Appearance (Resin)</b>	Black
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• High temperature resistance</li> <li>• High thermal conductivity</li> <li>• Excellent chemical resistance</li> <li>• Low coefficient of thermal expansion</li> <li>• Low shrinkage</li> </ul>
<b>Cure</b>	Room temperature or Heat cure
<b>Application</b>	Potting, Encapsulant

LOCTITE STYCAST 2762FT epoxy encapsulant is designed for potting electronic components exposed to harsh environments. This material is also ideal for large and complex castings that require high temperature resistance and thermal conductivity.

LOCTITE STYCAST 2762FT can be used with a variety of catalysts. For more information on mixed properties when used with other available catalysts, please contact your local technical service representative for assistance and recommendations.

## CATALYST DESCRIPTION

LOCTITE CAT 14 provides the following product characteristics:

<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• Powdered epoxy hardener</li> <li>• Chemical resistant</li> <li>• High temperature performance</li> <li>• Long work life</li> </ul>
<b>Cure</b>	Heat cure

LOCTITE CAT 17 provides the following product characteristics:

<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• High temperature resistant</li> <li>• Long work life</li> <li>• High temperature performance</li> <li>• Chemical resistant</li> </ul>
<b>Cure</b>	Heat cure

LOCTITE CAT 17M-1 provides the following product characteristics:

<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• Non crystallizing version of LOCTITE CAT 17</li> <li>• Ease of use and handling</li> </ul>
<b>Cure</b>	Heat cure

## TYPICAL UNCURED PROPERTIES

### LOCTITE STYCAST 2762FT

Brookfield Viscosity , mPa·s (cP)	250,000
Density, g/cm <sup>3</sup>	2.4
Shelf Life @ 25°C (from date of manufacture), days	365
Flash Point - See SDS	

## TYPICAL UNCURED PROPERTIES AS MIXED

### LOCTITE STYCAST 2762FT with LOCTITE CAT 14

Mixed Density , g/cm <sup>3</sup>	2.31
Mix Ratio, Material:Catalyst, by weight	100:8
Work Life, 100 grams, @ 25°C, hours	>24

### LOCTITE STYCAST 2762FT with LOCTITE CAT 17

Mixed Viscosity, Brookfield , mPa·s (cP)	150,000
Mixed Density , g/cm <sup>3</sup>	2.23
Mix Ratio, Material:Catalyst, by weight	100:10
Work Life, 100 grams, @ 25°C, hours	>24

### LOCTITE STYCAST 2762FT with LOCTITE CAT 17M-1

Mixed Viscosity, Brookfield , mPa·s (cP)	150,000
Mixed Density , g/cm <sup>3</sup>	2.23
Mix Ratio, Material:Catalyst, by weight	100:10
Work Life, 100 grams @ 25°C, hours	24

## TYPICAL CURING PERFORMANCE

### Cure Schedule

#### LOCTITE STYCAST 2762FT with LOCTITE CAT 14

3 hours @ 150°C

#### LOCTITE STYCAST 2762FT with LOCTITE CAT 17 and LOCTITE CAT 17M-1

Regular Castings

3 hours @ 125°C plus 3 hours @ 175°C

For larger or extremely large castings

16 hrs @ 65°C, plus 6 hrs @ 125°C, plus 6 hrs @ 150°C

For optimum performance, follow the initial cure with a post cure of 4 to 6 hours at the highest expected use temperature.

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

### LOCTITE STYCAST 2762FT with LOCTITE CAT 14

#### Physical Properties

Hardness, Shore D	94
Thermal Conductivity, W/(m·K)	1.34
Operating temperature, °C	-20 to +230

#### Electrical Properties

Dielectric Strength, kV/mm	15
Dielectric Constant / Dissipation Factor@ 1 MHz	5.8/0.01
Volume Resistivity @ 25°C, ohm-cm	>1×10 <sup>15</sup>

**LOCTITE STYCAST 2762FT with LOCTITE CAT 17****Physical Properties**

Hardness, Shore D	94
Thermal Conductivity, W/(m-K)	1.34
Water Absorption (24 hr immersion), %	0.2
Coefficient of Thermal Expansion, ppm/°C	38
Operating temperature, °C	-20 to +230

**Electrical Properties**

Dielectric Strength, kV/mm	15
Dielectric Constant / Dissipation Factor @ 1 MHz	5.8/0.01
Volume Resistivity @ 25 °C, ohms-cm	>1×10 <sup>15</sup>

**LOCTITE STYCAST 2762FT with LOCTITE CAT 17M-1****Physical Properties**

Hardness, Shore D	94
Thermal Conductivity, W/(m-K)	1.34
Operating temperature, °C	-20 to +230

**Electrical Properties**

Dielectric Strength, kV/mm	15
Dielectric Constant / Dissipation Factor @ 1 MHz	5.8/0.01
Volume Resistivity @ 25°C, ohm-cm	>1×10 <sup>15</sup>

**GENERAL INFORMATION**

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

**DIRECTIONS FOR USE**

1. Complete cleaning of the components and substrates should be performed to remove contamination such as dust, moisture, salt and oils which can cause electrical failure, poor adhesion or corrosion in an embedded part.
2. Some filler settling is common during shipping and storage. For this reason, it is recommended that the contents of the shipping container be thoroughly mixed prior to use.
3. Power mixing is preferred to ensure a homogeneous product.
4. Accurately weigh resin and hardener into a clean container in the recommended ratio. Weighing apparatus having an accuracy in proportion to the amounts being weighed should be used.
5. Blend components by hand, using a kneading motion, for 2 to 3 minutes and scrape the bottom and sides of the mixing container frequently to produce a uniform mixture.
6. If possible, power mix for an additional 2 to 3 minutes. Avoid high mixing speeds. This can entrap excessive amounts of air. It can also cause overheating of the mixture, resulting in reduced working life.
7. To ensure a void-free embedment, vacuum deairing should be used to remove any entrapped air introduced during the mixing operation.
8. Vacuum deair mixture at 1 to 5 mm mercury. The foam will rise several times the liquid height and then subside.
9. Continue vacuum deairing until most of the bubbling has ceased. This usually takes 3 to 10 minutes.
10. Pour mixture into cavity or mold.
11. To facilitate deairing in difficult to deair materials, add 1 to 3 drops of an air release agent, such as ANTIFOAM 88 into 100 grams of mixture.
12. Gentle warming will also help, but pot life will be shortened.
13. Pour mixture into cavity or mold.
14. Gentle warming of the mold or assembly reduces the viscosity. This improves the flow of the material into the unit having intricate shapes or tightly packed coils or components.
15. Further vacuum deairing in the mold may be required for critical applications.

**Storage**

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

**Optimal Storage : 25 °C**

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/mm<sup>2</sup>  
 MPa = N/mm<sup>2</sup>  
 N·m x 8.851 = lb·in  
 N·m x 0.738 = lb·ft  
 N·mm x 0.142 = oz·in  
 mPa·s = 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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