



# STYCAST 2762

July 2016

## PRODUCT DESCRIPTION

LOCTITE STYCAST 2762 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>• Low coefficient of thermal expansion</li><li>• Low shrinkage during cure</li><li>• Excellent adhesion to metals, glass or plastic materials</li></ul>
<b>Cure</b>	Heat cure
<b>Application</b>	Potting, Encapsulant

LOCTITE STYCAST 2762 is used to embed electronic compounds to hermetically sealed metal surfaces. It is also designed to act as a high temperature resistant protective coating.

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>• Use for powdered for paste applications</li><li>• Chemical resistant</li><li>• High temperature performance</li><li>• Long work life</li></ul>
<b>Cure</b>	Heat cure
<b>Mix Ratio, by weight - Material:Catalyst</b>	100 : 8

LOCTITE CAT 17 provides the following product characteristics:

<b>Product Benefits</b>	<ul style="list-style-type: none"><li>• Preferred for easy pourability</li><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
<b>Mix Ratio, by weight - Material:Catalyst</b>	100 : 10

## TYPICAL UNCURED PROPERTIES

### LOCTITE STYCAST 2762

Viscosity @ 25 °C,	90
Density, g/cm <sup>3</sup>	2.3
Shelf Life @ 18 to 25°C (from date of manufacture), days	365
Flash Point - See SDS	

## TYPICAL CURING PERFORMANCE

### Cure Schedule

#### LOCTITE STYCAST 2762 with LOCTITE CAT 14

3 hours @ 120°C

For improved high temperature properties, cure for an additional 3 hours @ 150°C.

#### LOCTITE STYCAST 2762 with LOCTITE CAT 17 (BE)

Regular Castings

3 hours @ 90°C plus 3 hours @ 150°C

For larger or extremely large castings

16 hrs @ 65°C, plus 3 hrs @ 120°C, plus 3 hrs @ 150°C

Recommended Gel Time

30 minutes @ 90°C

It is useful to gel LOCTITE STYCAST 2762 for certain applications to prevent filler setting.

Add LOCTITE CAT 17 to LOCTITE STYCAST 2762 per recommended mix ratio plus 2.5 parts LOCTITE CAT 16 as an accelerator. Pot life will be shortened. Continue to cure as indicated.

A post cure of 16 hours @ 180°C may also be used.

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 2762 with LOCTITE CAT 17

#### Physical Properties

Hardness, Shore D	90
Coefficient of Linear Thermal Expansion, ppm/°C	20
Thermal Conductivity, W/(m-K)	1.4
Flexural Modulus :	
@ 20 °C	N/mm <sup>2</sup> 8,000 (psi) (1,160,302)
@ 150 °C	N/mm <sup>2</sup> 5,400 (psi) (783,203)
Compressive Modulus of Elasticity	N/mm <sup>2</sup> 8,200 (psi) (1,189,309)
Moisture Absorption, 24 hrs immersion, %	0.02
Operating temperature, °C	-70 to +230
Machinability	must be ground

(STYCAST 2762 FT has lower thermal conductivity and greater thermal expansion. STYCAST 2762 has good thermal shock properties.)

STYCAST 2762 is compatible with STYCAST 2662. STYCAST 2762 has a higher heat distortion temperature and a lower thermal expansion coefficient than STYCAST 2662.



**Electrical Properties**

Volume Resistivity, ohms-cm:	
@ 20 °C	1×10 <sup>16</sup>
@ 150 °C	1×10 <sup>11</sup>
Dielectric Strength, kV/mm:	
@ 20 °C	16
@ 150 °C	14.8
Dielectric Constant / Dissipation Factor:	
@ 60Hz	4.3/0.007
@ 1MHz	3.9/0.009
@ 1GHz	3.3/0.012

**TYPICAL PERFORMANCE OF CURED MATERIAL LOCTITE****STYCAST 2762 with LOCTITE CAT 17 (BE)****Miscellaneous**

Compressive Strength	N/mm <sup>2</sup> 120 (psi) (17,404)
Flexural Strength:	
@ 20 °C	N/mm <sup>2</sup> 70 (psi) (10,152)
@ 150 °C	N/mm <sup>2</sup> 50 (psi) (7,251)

**GENERAL INFORMATION**

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

**DIRECTIONS FOR USE****LOCTITE STYCAST 2762 with LOCTITE CAT 14**

- Mix thoroughly in the container in which it is received. Weight out the required amount of Parts A and B. Mix the dry powdered LOCTITE CAT 14 into LOCTITE STYCAST 2762 at room temperature. Extreme care should be taken to insure thorough mixing. The resulting mixture is almost paste consistency and is stable for at least one day at room temperature. Pour into mold or cavity. Vibration will improve flowability. For sealing applications, apply to the cleaned surfaces and squeeze out the excess.
- Cure as recommended.

**LOCTITE STYCAST 2762 with LOCTITE CAT 17 (BE)**

- Use of LOCTITE CAT 17 (BE) is preferred for easy pourability.
- Mix thoroughly in the container in which it is received. Weight out the required amount of Parts A and B.
- LOCTITE CAT 17 (BE) may be solid at room temperature. Material will become liquid when warmed to about 65°C. Warming to about 65°C will improve flowability. If desired, the catalyzed resin can be maintained at about 65°C. At this temperature, pot life is at least 8 hours. The item to be embedded and mold can also be preheated.
- Pour mixture in mold or cavity. Cure as recommended.

**Storage**

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**

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

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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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Reference 1

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