Technical Data Sheet

LOCTITE STYCAST W 66 CAT 17M-1

August 2019

PRODUCT DESCRIPTION

LOCTITE STYCAST W 66 CAT 17M-1 provides the following product characteristics:

Technology	Epoxy
Technology (Catalyst)	Anhydride
Appearance (Resin)	Amber liquid
Appearance (Catalyst)	Tan
Components	Two components - requires mixing
Mix Ratio, (by weight) Resin : Hardener	100 : 40
Mix Ratio, by volume - Base : Hardener	100 : 33.5
Product Benefits	• Medium viscosity • High temperature resistance • Excellent chemical resistance
Cure	Heat Cure
Application	Encapsulation, Potting
Operating Temperature	-20 to +220 °C

LOCTITE STYCAST W 66 CAT 17M-1 is designed for encapsulation and potting of electronic assemblies that are subjected to high temperature exposure.

LOCTITE STYCAST 1090 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.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties *LOCTITE STYCAST W 66*

Viscosity, Brookfield , 25 °C, mPa·s (cP)	12,000
Density, , g/cm³	1.17
Shelf Life @ 25°C, days	365
Flash Point - See SDS	

Part B Properties *LOCTITE CAT 17M-1*

Density, , g/cm³	1.4
Flash Point - See SDS	

Mixed Properties

Mixed Viscosity, mPa·s (cP)	15,000
Density, , g/cm³	1.23
Working Time, 100 g mass, @ 25ºC, hours	>24
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

3 hours @ 100°C plus 3 hours @ 175°C

For optimum performance, follow the initial cure with a post cure of 2 to 4 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

Physical Properties

Hardness, Shore D	85

Electrical Properties

Dielectric Strength, volts/mil	510
Volume Resistivity @ 25ºC, ohm-cm	$>1\times10^{14}$
Dielectric Constant/ Dissipation Factor:	
@ 1 KHz	4.4/0.004

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. To ensure the long term performance of the potted or encapsulated electrical/electronic assembly, complete cleaning of the 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 separation of components 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. Power mixing is preferred to ensure a homogeneous product.
3. Accurately weigh resin and hardener into a clean container in the one of the recommended ratios. Weighing apparatus having an accuracy in proportion to the amounts being weighed should be used.
4. Blend components by hand, using a kneading motion, for 2 to 3 minutes. Scrape the bottom and sides of the mixing container frequently to produce a uniform mixture. If possible, power mix to an additional 2 to 3 minutes. Avoid high mixing speeds which could entrap excessive amounts of air or cause overheating of the mixture resulting in reduced working life.
5. To ensure a void-free embedment, vacuum deairing or degassing should be performed to remove any entrapped air introduced during the mixing operation. Pump-down or pull vacuum on the mixture to achieve an ultimate vacuum or absolute pressure of 1- 5 torr or mmHg. The foam will rise several times the liquid height and then subside. Continue vacuum deairing until most of the bubbling has ceased. This usually requires 3-10 minutes.
6. To facilitate deairing in difficult to deair materials, add 1-3 drops of an air release agent, such as ANTIFOAM 88, into 100 grams of mixture. Gentle warming will also help, but working life will be shortened.
7. To eliminate moisture absorbed in coils, paper, and other insulation components, the part to be impregnated or potted should be preheated to 100-120°C. For coil molding, preheat the components and mold to 70-90ºC prior to pouring.
8. This material is not recommended for impregnation of tightly wound components since a portion of the Catalyst consists of fine solid particles which may be filtered out by fine windings, fabric, and paper.

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/F
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

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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicity agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana S.A.S. the following disclaimer is applicable:

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. 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation Resin Technology Group, Inc., or Henkel Canada, Inc. the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of mechantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1