

LOCTITE STYCAST S 5100

April 2020

PRODUCT DESCRIPTION

LOCTITE STYCAST S 5100 provides the following product characteristics:

Technology	Silicone
Appearance (cured)	Red liquid
Components	Two components - requires mixing
Mix Ratio, by weight - Part A: Part B	100 : 100
Mix Ratio by volume: Part A: Part B	100 : 100
Product Benefits	<ul style="list-style-type: none"> • Easy mix ratio • Ideal for meter/mix dispensing • Long pot life • High heat resistance • Rapid heat cure
Operating Temperature Range	-55 to +260°C
Cure	Heat cure
Application	Encapsulants, Potting

LOCTITE STYCAST S 5100 two part silicone is specially formulated for use in the manufacture of rollers used in reprographic industry. This material is designed to maintain its physical properties at elevated temperatures up to 260°C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Density, , g/cm ³	1.35
Storage Life @ 25 °C, days	180
Flash Point - See SDS	

Part B Properties

Density, , g/cm ³	1.35
Storage Life @ 25 °C, days	180
Flash Point - See SDS	

Mixed Properties

Mixed Density, g/cm ³	1.35
Working Life, 100 g @ 25°C, hours	>16
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE (As Mixed)

Recommended Curing Conditions

1 hour @ 150°C
15 minutes @ 200°C

For optimum performance, follow the initial cure with a post cure of 4 hours at 200°C.

Alternate cure schedules may also be possible. Contact your Henkel representative for further information.

This product may be cured in large castings with no adverse heat or exotherm effects. There is essentially no limit on casting size due to shrinkage or exotherm.

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 (As Mixed)

Physical Properties

Hardness, Shore A	35
Elongation, %	>250

TYPICAL PERFORMANCE OF CURED MATERIAL (As Mixed)

Miscellaneous

Tensile Strength	N/mm ² >0.8	(psi) (>700)
------------------	------------------------	--------------

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.

DIRECTIONS FOR USE

1. Thoroughly read the information concerning health and safety contained in this bulletin before using. Observe all precautionary statements that appear on the product label and/or contained in individual Safety Data Sheets (SDS).
2. 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.
3. The cure of this silicone product may be inhibited through contact with certain contaminants. Avoid contact with butyl and chlorinated rubbers, amines, sulfur or sulfur containing materials, tin containing compounds, or heavy metal salts. Substrates in question should be evaluated for compatibility before application of this product. In addition, molds, mixing equipment, ovens and other

apparatus that will be used in the preparation and curing of this product should be free of inhibiting contaminants.

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 should be used to remove any entrapped air introduced during the mixing operation. Vacuum deair mixture at 1-5 mm mercury. 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 to 10 minutes.
6. In general, silicone materials exhibit outstanding release properties and will not adhere to most substrates. If adhesion is required, apply a thin, uniform coating of LOCTITE STYCAST S 11NC PRIMER to the clean, dry substrates. Allow LOCTITE STYCAST S 11NC PRIMER to dry for 30 to 60 minutes at room temperature before applying the silicone material.

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 25°C or below, in closed containers. If stored below 25°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

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

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 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 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 Corporation, 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 merchantability 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