Technical Data Sheet

LOCTITE STYCAST 2754

September 2019

PRODUCT DESCRIPTION

LOCTITE STYCAST 2754 provides the following product characteristics:

Technology (Part A)	Epoxy
Technology (Part B)	Amine
Components	Two components - requires mixing
Appearance - Part A	Black liquid
Appearance - Part B	White liquid
Appearance - Mixed	Black liquid
Mix Ratio, by weight - Part A: Part B	100 : 40
Product Benefits	• Low stress on embedded components • Environmental resistant • Low exotherm
Cure	Heat cure
Application	Potting or Encapsulation
Operating Temperature Range	-65 to +105ºC

LOCTITE STYCAST 2754 is designed for applications where minimum stress on the embedded components is required.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Viscosity, Brookfield, mPa·s (cP)	60,000
Density, g/cm³	1.55
Shelf Life @ 25 °C (from date of manufacture), days	365
Flash Point - See SDS	

Part B Properties

Viscosity, Brookfield, mPa·s (cP)	2,000
Density, g/cm³	1.45
Shelf Life @ 25ºC	365
Flash Point - See MSDS	

Mixed Properties

Viscosity, mixed, Brookfield , °C, mPa·s (cP)	24,000
Mixed Density , g/cm³	1.53
Working Life, 100 g mass @ 25ºC, hour	>1
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE AS MIXED

Cure Schedule

48 hours @ 25°C or
24 hours @ 45°C or
8 hours @ 65°C or
2 hours @ 100°C

For optimum performance, follow the initial cure with a post cure of 2 to 4 hours at the highest expected use temperature.

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. In order to minimize stress during cure, large parts should be cured at 45ºC or below.

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	80
Linear Shrinkage, cm/cm	0.0065
Thermal Conductivity , W/(m-K)	0.63

Electrical Properties

Volume Resistivity @ 25ºC, , ohm-cm	2×10^{13}
Dielectric Strength, kV/mm	17.7
Dielectric Constant/Dissipation Factor @ 1 MHz	4.9/0.13

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 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. Power mixing is preferred to ensure 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. Pour mixture into cavity or mold. 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. Further vacuum deairing in the mold may be required for critical applications.

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

STORAGE:

Store in original, tightly covered containers in clean, dry areas. Storage information may be indicated on the product container labeling.

Optimal Storage : Part A: -20 to 15ºC, Part B: 5 to 35ºC

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.

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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Reference N/A

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