Technical Data Sheet

LOCTITE STYCAST 2760

February 2020

PRODUCT DESCRIPTION

LOCTITE STYCAST 2760 provides the following product characteristics:

Technology	Epoxy, Urethane
Technology (Part B)	Amine
Appearance,Resin (Component A)	Black liquid
Appearance, Hardener (Component B)	Black liquid
Components	Two components - requires mixing
Mixing Ratio, by weight Component A: Component B	100 : 50
Mixing Ratio, by volume Component A: Component B	100 : 55
Product Benefits	• Low viscosity • Good adhesion to vinyl • Bonds to vinyl insulated wires and cables • Ease of use
Cure	Room Temperature or Heat Cure
Application	Encapsulation, Potting
Typical Assembly Applications	Potting components containing vinyl insulated wires or cables
Operating Temperature	-40 to +130ºC

LOCTITE STYCAST 2760 potting components containing vinyl insulated wires or cable.

It has been designed for excellent adhesion to vinyl substrates.

The epoxy portion of the system offers good physical, mechanical, electrical, and chemical resistance properties, while the urethane portion offers good resilience, impact resistance, thermal shock, and cycling properties.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties :

Brookfield Viscosity , mPa·s (cP)	53,000
Density, g/cm³	1.6
Flash Point - See SDS	

Part B Properties :

Brookfield Viscosity , mPa·s (cP)	9,600
Density, g/cm³	1.46
Flash Point - See SDS	

Mixed Properties :

Brookfield Viscosity , mPa·s (cP)	18,000
Density, g/cm³	1.55
Work Life, 100 grams @ 25 °C, minutes	60
Shelf Life @ 25ºC , days	180
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Cure Schedule

24 to 48 hours @ 25°C
4 hours @ 65°C
2 hours @ 100°C

Cure at any one of the recommended cure schedules.

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	80
Coefficient of Thermal Expansion 10^{-6}/°C, TMA	122
Thermal Conductivity , W/(m-K)	0.6

Electrical Properties:

Dielectric Strength, kV/mm	17.7
Dielectric Constant / Dissipation Factor: @ 1mHz	3.95/0.011
Volume Resistivity @ 25 °C, ohm-cm	$>1\times10^{14}$

TYPICAL PERFORMANCE OF CURED MATERIAL

Flexural strength	N/mm²	15.9
	(psi)	(2,300)

Compressive Strength	N/mm²	76
	(psi)	(11,000)

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. To ensure the long term performance of the potted or encapsulated electrical / electronic assembly, complete cleaning of 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. Power mixing is preferred to ensure homogeneous product.
3. 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.
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.
5. 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.
6. 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.
7. 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.
8. Gentle warming will also help, but pot life will be shortened.
9. Pour mixture into cavity or mold.
10. 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.
11. Further vacuum deairing in the mold may be required for critical applications.

STORAGE:

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

Optimal Storage: 25°C. Storage below 25°C or greater than 25°C can adversely affect product properties.

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

(°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 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.

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