TECHNICAL TIP

LOCTITE UV8800M

September 2016

PRODUCT DESCRIPTION

LOCTITE UV8800M provides the following product characteristics:

Technology	Epoxy
Appearance	Medium grey paste
Product Benefits	• One component • Medium viscosity • Cures rapidly • Low shrinkage • Excellent adhesion
Filler Weight, %	53.6
Cure	Ultraviolet (UV) light
Application	Encapsulant
Typical Package Application	Chip scale packages and BGA
Substrates	Glass, Epoxy, Polyimide and Polyester

LOCTITE UV8800M epoxy encapsulant is developed to meet high temperature thermal cycling specifications. It cures to form a hard translucent coating when exposed to UV light of sufficient intensity. The curing of the product is not inhibited by oxygen, resulting in excellent surface cure. Its viscosity characteristics and dearated condition make it suitable for accurate dispensing with excellent shape control.

TYPICAL PROPERTIES OF UNCURED MATERIAL

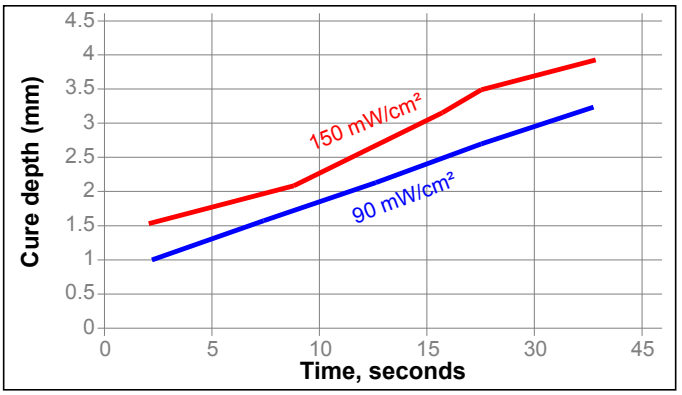
Viscosity @ 25 °C, mPa·s (cP)	2,500 to 4,000
Specific Gravity	1.6
Filler Partical Size, µm:	
D95	21
D50	5
Shelf Life @ 0 to 5°C, months	6
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Typical UV Cure Condition

Medium pressure mercury lamp:

Light Dose, mW/cm²	100
Exposure Time, seconds	2
UV radiation, nm (UVA)	315 to 400



LOCTITE UV8800M can be cured by irradiation with ultraviolet and visible light as well as LED-UV light with single wavelength distribution of sufficient intensity. Cure rate and depth of cure depend on the intensity, spectral distribution of the light source, exposure time and light transmittance of the substrate through which the light must pass.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties :

Coefficient of Thermal Expansion ISO 11359-2:	
Below Tg, ppm/°C	41
Above Tg, ppm/°C	135
Glass Transition Temperature (Tg), °C	29
Shore Hardness, Durometer D	78
Extractable Ionic Content, MIL-S-883, ppm:	
Chloride (Cl-)	34
Fluoride (F-)	237
Water Absorption , %:	
24 hrs @ 25°C	0.9
DMA Modulus @ 25°C, , MPa	2,850

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.

STORAGE:
Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage : 0 to 5 °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.

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/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.

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.

Reference N/A