

LOCTITE STYCAST EE 8016F EB 0363

June 2021

PRODUCT DESCRIPTION

LOCTITE STYCAST EE 8016F EB 0363 provides the following product characteristics:

Technology	Epoxy
Technology (Part B)	Anhydride
Appearance - Part A STYCAST EE 8016F	Blue / Brown
Appearance - Part B STYCAST EB 0363	Green
Components	Two components - requires mixing
Mix Ratio, by weight - Resin : Hardener	100 : 35
Mix Ratio, (by volume) Resin : Hardener	100 : 54
Product Benefits	• Long pot life • Crack resistant • Flame retardant • High impact strength • Excellent electrical properties • Rapid cure • Flexible and temperature cycle resistant • No halogenated chemicals and antimonytrioxide
Cure	Heat cure
Application	Potting

LOCTITE STYCAST EE 8016F EB 0363 is a two-component potting epoxy system formulated to have excellent flow enabling full impregnation of fine wires in electronic assembly applications. It contains non-abrasive fillers to prevent excessive wear on dispensing equipment. Typical applications include potting and impregnation of transformers and coils in combination with pressure sensitive components, potting modules and PC-boards and potting of hybrids in thermoplastic cases.

LOCTITE STYCAST EE 8016F meets UL 94 V0 flammability rating at 1/4 thickness.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties LOCTITE STYCAST EE 8016F

Viscosity, Epprecht Viscometer, 25 °C, mPa·s (cP):	
Spindle D, speed 2 rpm	30,000
Density @ 25°C, g/cm ³	1.69 +/- 0.03
Filler Content, %	64.5
Shelf Life @ 25°C, days	365
Flash Point - See SDS	

Part B Properties LOCTITE STYCAST EB 0363

Viscosity, Epprecht Viscometer, 25 °C, mPa·s (cP):	
Spindle C, speed 5 rpm	3,000
Density @ 25°C, g/cm ³	1.09
Filler Content, %	0
Shelf Life @ 25°C, days	365

Flash Point - See SDS

Mixed Properties

Mixed Viscosity, Epprecht Viscometer, Spindle D, mPa·s (cP):

@ 25 °C	5,000
@ 50 °C	700
@ 75 °C	150

Time to double initial viscosity:

@ 25°C, hours (approx)	8
@ 50°C, minutes (approx)	120
@ 75°C, minutes (approx)	30

Pot Life @ 25°C, time to double viscosity, hours 8

Flash Point - See SDS

TYPICAL CURING PERFORMANCE (As Mixed)

Gel Time

Gel Time:	
@ 80 °C, minutes	95
@ 90 °C, minutes	60
@ 110 °C, minutes	18
@ 120 °C, minutes	11

Recommended Cure Schedule

2 hours @ 90°C plus 3hours @ 110°C

Alternate Cure Schedule

6 hours @ 100°C

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and specific 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 D, DIN 53505	40
Impact Strength, DIN 53453, kJ/m ²	50
Flexural Strength @ 1% edge extension:	
Edge-extension, DIN 53452, N/mm ²	1.55
Edge-extension at break, DIN 53452, %	1.55
Thermal Conductivity @ 100°C, W/(m·K)	0.48

Electrical Properties

Surface Resistivity, ohms :	
@ 25°C	1.98×10 ¹⁵
@ 105°C	5.75×10 ¹¹
Volume Resistivity , ohms:	
@ 25 °C	7.2×10 ¹³
@ 105°C	1.47×10 ¹¹
Dielectric Strength @ 25°C, 18 mil thickness, 29.92 kV/mm	

Track Resistance, DIN IEC 112, CTI	>600
Dielectric Constant (ϵ)/ Dissipation Factor ($\tan \delta$):	
@ 25°C:	
@ 100Hz	6.6/0.072
@ 1KHz	5.89/0.066
@ 10KHz	5.38/0.057
@ 100KHz	4.95/0.052
@ 105 °C:	
@ 100Hz	8.14/0.379
@ 1KHz	7.08/0.071
@ 10KHz	6.76/0.03
@ 100KHz	6.45/0.038

GENERAL INFORMATION

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

Directions for Use

1. The filler in LOCTITE STYCAST EE 8016F will settle upon prolonged storage. Container must be thoroughly mixed before combining LOCTITE STYCAST EE 8016F EB 0363.
2. Certain resins and hardeners are prone to crystallization if stored below 10°C. If crystallization occurs, preheat between 60°C to 100°C until liquid.
3. LOCTITE STYCAST EB 0363 material is moisture sensitive and may form a crust if exposed to moist air for an extended period of time.
4. Keep in a well sealed container.
5. Do not use metering vessels made of zinc. Suitable are metering vessels made of steel or steel covered with plastic.
6. LOCTITE STYCAST EE 8016F EB 0363 should be de-aired and homogenized (in metering mixer/vessel) between 50 to 100°C at <10 mbar to avoid bubble formation and to ensure good impregnation.
7. The following steps are recommended prior to potting to avoid bubble formation and to ensure good impregnation:
 - LOCTITE STYCAST EE 8016F EB 0363 should be de-aired and homogenized (in metering mixer/vessel) between 50 to 100°C at <10 mbar.
 - LOCTITE STYCAST EB 0363 should be de-aired between 30 to 40°C at <10mbar.
 - Preheat electrical device housings between 80 to 120°C.
 - Temperature of mixture of LOCTITE STYCAST EE 8016F with LOCTITE STYCAST EB 0363 is 50 to 80°C.

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 Henkel 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

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