



EE1117 HD3561

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PRODUCT DESCRIPTION

EE1117 HD3561 provides the following product characteristics:

Technology	Epoxy
Appearance - Part A	gray
Appearance - Part B	Light amber
Appearance (cured)	gray
Components	Two component - requires mixing
Mix Ratio, by weight - Part A: Part B	100 : 10
Mix Ratio, by volume - Part A: Part B	11 : 2
Cure	Heat cure
Application	Sealant and Potting

EE1117 HD3561 epoxy system is designed for use as a sealant or for potting electronic devices. It is specially formulated for LED display backfill applications.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties EE1117

Filler Content, ASTM D2584, %	67
Density @ 25 °C, ASTM D1475	1.8
Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP):	
Spindle 7, speed 2 rpm,	240,000
Spindle 7, speed 20 rpm	115,000
Shelf Life @ 25°C (from date of shipment), year	1
Flash Point - See MSDS	

Part B Properties HD3561

Hydrogen equivalent, mEq HClO ₄ /gm	9.0
Density @ 25 °C, ASTM D1475	1
Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP):	
Spindle 1, speed 20 rpm,	20
Shelf Life @ 25°C (from date of shipment), year	1
Flash Point - See MSDS	

Mixed Properties

Viscosity, Brookfield - RVF, 200 gram mass, 25 °C, mPa·s (cP):	
Spindle 6, speed 2 rpm	50,000
Spindle 6, speed 20	43,000
Thixotropic Index (2/20 rpm)	2.5
Pot Life @ 25°C, 200 gm mass, minutes	65
Flash Point - See MSDS	

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

3 hours @ 25°C plus 2 hours @ 85°C

Alternative Cure Schedule

4 hours @ 60°C

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

Coefficient of Linear Thermal Expansion, ASTM D3386, ppm/°C:

Below T _g	30
Above T _g	90
Glass Transition Temperature (T _g), ASTM D3386, °C	65
Filler Content, ASTM D2584, %	60
Hardness, Shore D, ASTM D2240	88
Guide to Operating Class, IEEE °C	105

Electrical Properties

Dielectric Constant / Dissipation Factor @ 25°C, ASTM D150:

@ 100 Hz	5.71/0.005
@ 1 KHz	5.75/0.008
@ 10 KHz	5.66/0.019
@ 100 KHz	5.47/0.046
Volume Resistivity, ASTM D257, ohm-cm	4.5×10 ¹⁴
Surface Resistivity, ASTM D257, ohms	1.1×10 ¹⁵

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous

Tensile Strength, ASTM D638	N/mm ²	6,000
	(psi)	(870,226)
Flexural Strength, ASTM D790	N/mm ²	11,000
	(psi)	(1,595,415)

GENERAL INFORMATION

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

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

Liquid Storage - Liquids should be stored at 23°C or below, in closed containers. If stored below 23°C, the material **MUST** be allowed to come to room temperature, in the sealed container, to avoid moisture contamination.

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 Technical Service Center or Customer Service Representative

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{N/mm}^2 \times 145 = \text{psi}$

$\text{MPa} \times 145 = \text{psi}$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

Note

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Reference 0.0