

LOCTITE M 7000E E&C

March 2019

PRODUCT DESCRIPTION

LOCTITE M 7000E E&C provides the following product characteristics:

Technology	Thermosetting
Appearance	Blue
Product Benefits	• Screen printable • One component • Dielectric • Insulating • High resistance to heat and humidity
Cure	Heat cure
Application	Conductive Ink
Typical Assembly Applications	Printed circuit board and Hybrid circuits
Key Substrates	FR-2, FR-3, FR-4, FR-5, CEM-1, CEM-3, Copper and Ceramic

LOCTITE M 7000E E&C is designed for insulating hybrid circuitry. This adhesive is compatible with M 4100 MINICO E&C and M 2000 MINICO E&C Series inks.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content, %	68
Viscosity, Brookfield - RVT, mPa·s (cP)	110,000
Density, kg/cm ³	1,300
Theoretical coverage @ 10µm dry coating thickness 41, m ² /kg	
Shelf Life @18 to 25°C, days (from date of qualification in original seal)	365

TYPICAL SCREEN PRINTING PROCESS

Printing Equipment Type

Manual
Semi-automatic

Recommended Screen Type

Monofilament polyester & Stainless Steel , 61 to 77 threads/cm

Recommended Squeegee

Polyurethane , Shore Hardness 60 to 75
Speed (not to exceed), cm/s 10

Emulsion Thickness

Direct or indirect emulsion , µm 25 to 50

TYPICAL CURING PERFORMANCE

Convection Box Oven

25 minutes @ 165°C

Infrared Heat Source

4 minutes @ 165°C

The above cure profile is a guideline recommendation. 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

Cured as coating on FR4 and Cu

Physical Properties :

Adhesion, ASTM 3359 Method B, grade	5B
Scratch Resistance , JIS D 0202	6H

Electrical Properties:

Sheet Resistivity @ 25µm, ohms/sq	>2×10 ⁹
Breakdown voltage, ASTM D-149, kV/mm	39

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. LOCTITE M 7000E E&C should be thoroughly stirred prior to use. Avoid rapid stirring as this causes air entrapment..
2. Should thinning become necessary, dilute 1% by weight with Electrodag Diluent 2.

STORAGE:

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

Store in a cool, well ventilated area.

Optimal Storage : 18 to 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.

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

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{psi} \times 145 = \text{N/mm}^2$
 $\text{MPa} = \text{N/mm}^2$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

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