

LOCTITE EDAG PD 054 E&C

October 2012

PRODUCT DESCRIPTION

LOCTITE EDAG PD 054 E&C provides the following product characteristics:

Technology	Acrylate
Appearance	Silver
Product Benefits	<ul style="list-style-type: none"> Electrically conductive UV curable Fast UV cure
Cure	Ultraviolet (UV) light followed by heat cure
Application	Conductive Ink
Typical Applications	Conductive label applications

LOCTITE EDAG PD 054 E&C electrically conductive silver ink is ideal for applications using solvent or heat sensitive substrates. It is suitable for applications using flexographic or rotogravure printing techniques.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content, %	100
Viscosity, Brookfield CP42, 25 °C, mPa·s (cP):	
Speed 50 rpm	800
Density, kg/l	2.68
Shelf Life @ 15°C (from date of qualification in original seal), months	6

TYPICAL SCREEN PRINTING PROCESS

Recommended Film Thickness	
Thickness, µm	8 to 13
Emulsion Thickness	
Solvent resistant emulsion, µm	20
Recommended Squeegee	
Polyurethane or other solvent resistant material :	
When used on Polyester Mesh, durometer	60
When used on Stainless Steel Mesh, durometer	70
Recommended Screen Type	
Polyester screen, mesh	330
Stainless steel screen, mesh	400

TYPICAL CURING PERFORMANCE

Recommended UV Cure	
Light Source:	
Fusion "D"	
IR shifted mercury bulb	
Light Intensity, J/cm ²	1.4
Recommended Heat Cure	
60 seconds @ 100°C	

For optimum performance, follow the initial UV cure with the recommended heat cure.

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

Physical Properties

Theoretical Coverage, m ² / l	39.3
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Electrical Properties

Sheet Resistivity, ohms/sq/mil	<0.075
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GENERAL INFORMATION

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

DIRECTIONS FOR USE

Mixing/Dilution

- Gently stir prior to each use, mixing well from the bottom of the container, avoiding excessive heat or air entrapment.
- LOCTITE EDAG PD 054 E&C is supplied ready for use.
- Should thinning become necessary, dilute 2% by weight with .
- Many factors influence the cured film thickness. These include snap-off distance, screen mesh size, squeegee material, screen material and emulsion thickness.

Application Details

- LOCTITE EDAG PD 054 E&C may be applied by rotogravure, flexographic or flatbed screen printing process method.
- A dry coating thickness up to 8 to 13 µm can be applied by selecting the proper anilox or gravures
- Typical anilox rolls are 120 line, 14 bcm, quad ruled or 140 line, 12 bcm trihelic rolls. Praxair ART 15BCM 200 line anilox rolls are best for this product
- 1 to 2 passes are required to build a film thickness of 13 µm
- Flexographic transfer plates can be half-toned or textured to enhance thicker film builds

CLEAN-UP

- To clean screen and equipment, use Methyl ethyl ketone (MEK) or similar solvents.
- Clean the mesh of the screen until free of all visible particles in the screen.
- Allow screen to completely dry before using again.

STORAGE:

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

Optimal Storage : 15 °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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Reference 1

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