

# LOCTITE EDAG PF 410 E&C

October 2014

## PRODUCT DESCRIPTION

LOCTITE EDAG PF 410 E&C provides the following product characteristics:

<b>Technology</b>	Thermoplastic
<b>Appearance</b>	Silver
<b>Cure</b>	Heat cure
<b>Operating Temperature-continuous</b>	100°C
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• Applicable with manual, semi-automatic or high speed reel-to-reel screen printing equipment</li> <li>• Extended screen residence time</li> <li>• Excellent print definition</li> <li>• Non-critical, flexible low temperature drying cycles</li> <li>• Very low sheet resistance</li> <li>• Superior adhesion to polyester film</li> </ul>
<b>Application</b>	Conductive Ink
<b>Filler Type</b>	Silver

LOCTITE EDAG PF 410 E&C is designed for production of flexible circuitry. This material can be used on a variety of substrates. LOCTITE EDAG PF 410 E&C is passed over a triple roll mill to remove small particles.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content by Weight, %	75
Viscosity, Brookfield, 20 °C, mPa·s (cP):	
Speed 20 rpm	17,500
Density, Kg/m <sup>3</sup>	2,500
Theoretical coverage @ 10µm dry coating thickness, m <sup>2</sup> /kg	15
Shelf Life @ 5 to 30 °C (from date of qualification in original seal), year	1
Flash Point °C	110

## TYPICAL SCREEN PRINTING PROCESS

### Printing Equipment Type

- Manual
- Semi-automatic
- High speed reel-to-reel

### Applied Dry Coating Thickness

Applied Dry Coating Thickness, µm 8 to 12

### Recommended Screen Type

Monofilament polyester screen, T/HD 68 to 110  
Stainless steel screen, T/HD 90 to 154

### Recommended Squeegee

Polyurethane, durometer 70 to 75

### Emulsion Thickness

Emulsion Thickness, µm 20 to 40

## TYPICAL DRYING CYCLE

### Recommended Drying Cycle

Conventional Air Circulated Oven:

30 minutes @ 80°C or

15 minutes @ 120°C

LOCTITE EDAG PF 410 E&C can be dried immediately after printing at temperatures between 80 to 140°C. Higher temperatures will yield lower sheet resistance and better mechanical properties.

For high speed production, jet drying, infra-red drying and drying in high speed reel-to-reel equipment can be used.

The above drying profile is a guideline recommendation. Conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer drying equipment, oven loading and actual oven temperatures.

## TYPICAL PROPERTIES OF CURED MATERIAL

### Physical Properties

Adhesion, ASTM 3359 Method B, grade 5B

### Electrical Properties

Sheet Resistance @ 25, ohms/sq dry coating thickness <0.025

## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

### 1. Mixing/Dilution

- LOCTITE EDAG PF 410 E&C is supplied ready for use and does not require dilution..
- Gently stir prior to use.
- Avoid rapid stirring, as this causes air entrapment..
- Should thinning become necessary, use Electrodag Diluent 1 (1 to 2% by weight)..

### Clean-up

To clean screen and equipment, use MEK, MIBK or similar solvents

### Storage

Store product in the unopened container in a cool dry well ventilated area. Storage information may be indicated on the product container labeling.

**Optimal Storage: 5 to 30°C. Storage below 5°C or greater than 30°C can adversely affect product properties.**

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

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

### 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.

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