

# LOCTITE EDAG PR 400 E&C

March 2019

## PRODUCT DESCRIPTION

LOCTITE EDAG PR 400 E&C provides the following product characteristics:

<b>Technology</b>	Thermoset Resin
<b>Appearance</b>	Black
<b>Operating Temperature-</b>	150°C
<b>Solids Content, %</b>	56 to 60
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• One component</li> <li>• Low sheet resistance</li> <li>• Cost effective</li> <li>• Applicable with manual or semi automatic screen printing equipment</li> <li>• Good screen residence time</li> <li>• Excellent adhesion</li> <li>• Resistant to wave/hot air levelling soldering</li> <li>• Optimized rheology</li> <li>• Resistant to common industry solvents</li> </ul>
<b>Application</b>	Printed electronics, Conductive and dielectric inks
<b>Typical Assembly Applications</b>	Copper contact protection, Conductive pads and jumpers and Printed resistors
<b>Surfaces</b>	Copper, Phenolics and Glass epoxy

LOCTITE EDAG PR 400 E&C carbon polymer thick film ink is suitable for printed circuit boards.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity Brookfield , 20 rpm @ 20°C, mPa·s (cP)	30,000
Density, kg/m <sup>3</sup>	1,250
Theoretical coverage, wet product @ 10 µm dry coating thickness, m <sup>2</sup> /kg	37
Shelf Life @ 5 to 25°C (from date of manufacture), days	365
Flash Point , DIN 53213, °C	54

## TYPICAL SCREEN PRINTING PROCESS

### Recommended Thickness

Applied dry coating thickness , µm	12 to 15
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### Emulsion Thickness

Emulsion Thickness , µm	20 to 40
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## Recommended Screen Type

Monofilament polyester screen, threads/cm	61 to 90
Stainless steel screen , threads/cm	77 to 110

## Recommended Squeegee

Polyurethane , durometer	70 to 75
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## Printing Equipment Type

Manual  
Semi-automatic

## TYPICAL CURING PERFORMANCE

### Cure Schedule

30 minutes @ 150°C or higher if the substrate will allow

LOCTITE EDAG PR 400 E&C can be cured in conventional air circulated ovens @ 135°C.

Higher temperatures result in better characteristics.

Infrared curing can also be used successfully.

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 :

Adhesion, ASTM 3359 Method B, grade	5B
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### Electrical Properties:

Sheet Resistivity:	
Sample cured 30 minutes @ 135°C:	
@ Ω/sq/25µm	<30
Sample cured 30 minutes @ 150°C:	
@ Ω/sq/25µm	<25

## GENERAL INFORMATION

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

**DIRECTIONS FOR USE**

1. LOCTITE EDAG PR 400 E&C is supplied ready for use and does not require dilution.
2. Should thinning become necessary, dilute with 1 to 5% Electrodag Diluent 2 (butyl "Carbitrol").
3. LOCTITE EDAG PR 400 E&C should be thoroughly stirred prior to use. Avoid rapid stirring as this causes air entrapment.

**CLEAN-UP**

To clean screen and equipment, use Methylethylketone (MEK), MIBK, Acetone or similar solvents

**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 : 5 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**

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

**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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**Reference 2**