

# LOCTITE EDAG PR 406 E&C

September 2014

## PRODUCT DESCRIPTION

LOCTITE EDAG PR 406 E&C provides the following product characteristics:

<b>Technology</b>	Thermoset Resin
Appearance	Black
Filler Type	Carbon
Operating Temperature-Maximum, continuous	150°C
<b>Cure</b>	Heat cure
Product Benefits	<ul style="list-style-type: none"> <li>• One component</li> <li>• Low electrical resistance</li> <li>• Alternative to gold plating for copper contact protection</li> <li>• Resistant to wave/hot air levelling soldering</li> <li>• Optimum viscosity</li> <li>• Resistant to common industry solvents</li> <li>• Compatible with most commonly used fluxes</li> </ul>
<b>Application</b>	Conductive Ink
Typical Assembly Applications	Copper contact protection, Conductive pads and jumpers and Printed resistors
Surfaces	Copper, Phenolic paper (FR2), Epoxy paper (FR3) and Glass epoxy (FR4)

LOCTITE EDAG PR 406 E&C carbon polymer thick film ink is suitable for application on most rigid substrates.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content by Weight, %	58
Viscosity Brookfield - RVT, 20 rpm @ 20°C, mPa·s (cP)	30,000
Density, kg/cm <sup>3</sup>	1,240
Theoretical coverage, m <sup>2</sup> /kg: @ 10µm coating thickness	38
Shelf Life @ 5 to 30°C (from date of manufacture), year	1
Flash Point °C	54

## TYPICAL SCREEN PRINTING PROCESS

<b>Emulsion Thickness</b>	
Emulsion Thickness, µm	30
<b>Recommended Screen Type</b>	
Monofilament polyester screen, threads/cm	75.5
Stainless steel screen, threads/cm	93.5
<b>Recommended Squeegee</b>	
Polyurethane, durometer	72.5
<b>Printing Equipment Type</b>	
Manual	
Semi-automatic	
<b>Applied Dry Coating Thickness</b>	
Applied Dry Coating Thickness, µm	13.5

## TYPICAL CURING PERFORMANCE

### Cure Schedule

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

LOCTITE EDAG PR 406 E&C can be cured in conventional air circulated ovens.

Higher temperatures result in better characteristics.

This product can also be cured using infrared.

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, grade 5B

### Electrical Properties

Sheet Resistivity, Ω/sq/25µm <10

## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

1. LOCTITE EDAG PR 406 E&C is supplied ready for use and does not require dilution.
2. Should thinning become necessary, dilute with 2 to 6% Electrodag Diluent 2 (diethylene glycol monon-butyl ether).
3. LOCTITE EDAG PR 406 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 Methyleneethylketone (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 30 °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**

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

**Disclaimer****Note:**

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Reference 0.1