

# LOCTITE EDAG PR 406 E&C

August 2021

## 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/m <sup>3</sup>	1,240
Theoretical coverage, m <sup>2</sup> /kg: @ 10 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	

## Applied Dry Coating Thickness

Applied Dry Coating Thickness, µm	13.5
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## 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. These cure conditions (time and temperature) may vary based on customers' experience and specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

## TYPICAL PROPERTIES OF CURED MATERIAL

### Physical Properties

Adhesion, grade	5B
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### Electrical Properties

Sheet Resistivity, Ω/sq/25µm	<10
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## GENERAL INFORMATION

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

## 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 Methyl ethyl ketone (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 Henkel Representative.

#### Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local Henkel representative for assistance and recommendations on the specifications of this product.

#### Conversions

$$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$$

$$\text{kV/mm} \times 25.4 = \text{V/mil}$$

$$\text{mm} / 25.4 = \text{inches}$$

$$\text{N} \times 0.225 = \text{lb/F}$$

$$\text{N/mm} \times 5.71 = \text{lb/in}$$

$$\text{psi} \times 145 = \text{N/mm}^2$$

$$\text{MPa} = \text{N/mm}^2$$

$$\text{N} \cdot \text{m} \times 8.851 = \text{lb} \cdot \text{in}$$

$$\text{N} \cdot \text{m} \times 0.738 = \text{lb} \cdot \text{ft}$$

$$\text{N} \cdot \text{mm} \times 0.142 = \text{oz} \cdot \text{in}$$

$$\text{mPa} \cdot \text{s} = \text{cP}$$

#### Disclaimer

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. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

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Reference 0.2