

LOCTITE EDAG PR 401B E&C

March 2019

PRODUCT DESCRIPTION

LOCTITE EDAG PR 401B E&C provides the following product characteristics:

Technology	Thermoset Resin
Appearance	Black
Operating Temperature-	150°C
Solids Content, %	65 to 71
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none"> • One component • Can be mixed to produce accurately controlled resistance values • Applicable with manual or semi automatic screen printing equipment • Good screen residence time • Excellent adhesion • Resistant to common industry solvents • Stable resistance at elevated temperatures
Application	Printed electronics, Conductive and dielectric inks
Typical Assembly Applications	Printed resistors
Surfaces	Copper, Phenolics and Glass epoxy

LOCTITE EDAG PR 401B E&C are a series of screen printable inks of varying resistances, specifically designed for screen printing resistors onto rigid substrates in the production of printed circuit boards.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity Brookfield , 20 rpm @ 20°C, mPa·s (cP)	27,500
Density, kg/m ³	1,440
Theoretical coverage, wet product @ 10 µm dry coating thickness, m ² /kg	± 34
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

1 hour @ 150°C or higher if the substrate will allow

LOCTITE EDAG PR 401B E&C can be cured in conventional air circulated ovens @ 180°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, ohm/sq/25µm, ±30%	100
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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 401B E&C is supplied ready for use and does not require dilution.
2. In order to produce printed resistors off the required value, choose the product with the nearest resistance and blend with the next highest or lowest, depending upon whether you want to increase or decrease the resistance, in the appropriate quantity.
3. Should thinning become necessary, dilute with 1 to 5% Electrodag Diluent 2 (butyl "Carbitrol").
4. LOCTITE EDAG PR 401B 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 Methylenechloride (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

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

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Reference 1