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LOCTITE

Technical Data Sheet

# LOCTITE EDAG PF 455B E&C

September 2014

## PRODUCT DESCRIPTION

LOCTITE EDAG PF 455B E&C provides the following product characteristics:

| | |
|---|---|
| **Technology** | Acrylate |
| Appearance | Translucent green |
| **Cure** | Ultraviolet (UV)/ visible light |
| Product Benefits | • Non-conductive<br>• Excellent humidity resistance<br>• Excellent printability<br>• Fast UV cure<br>• Excellent adhesion<br>• Good dielectric strength |
| **Application** | Non-conductive Ink |
| Typical Assembly Applications | Insulating crossovers |
| Key Substrates | Treated and Untreated polyester film |

LOCTITE EDAG PF 455B E&C is formulated as a crossover dielectric and is compatible with other EDAG E&C inks.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

| | |
|---|---|
| Solids Content, % | 100 |
| Viscosity, Brookfield , mPa·s (cP): | |
| Speed 20 rpm, @ 25ºC | 13,500 |
| Density, kg/cm³ | 1,020 |
| Theoretical coverage, m² /kg: | |
| @ 10µm dry coating thickness | 98 |
| Shelf Life @ 5 to 25ºC , year: | |
| From date of qualification in original seal | 1 |

## TYPICAL SCREEN PRINTING PROCESS

**Recommended Thickness**

Dry coating, µm

| | |
|---|---|
| 61 threads/cm screen | 25 |
| 77 threads/cm screen | 18 |
| 120 threads/cm screen | 10 |

A 25 to 30µm thickness is recommended for crossovers, applied in two passes, to obtain a pore-free crossover coating.

**Emulsion Thickness**

| | |
|---|---|
| Emulsion Thickness , µm | 20 to 40 |

**Recommended Squeegee**

| | |
|---|---|
| Polyurethane , durometer | 70 to 75 |

**Recommended Screen Type**

| | |
|---|---|
| Monofilament polyester screen, threads/cm | 61 to 120 |
| Stainless steel screen , threads/cm | 77 to 160 |

**Printing Equipment Type**

Manual
Semi-automatic
High speed reel-to-reel

## TYPICAL CURING PERFORMANCE

**Recommended UV Cure Condition**

UV lamp 80Watt/cm or
UV lamp 120Watt/cm

When applying LOCTITE EDAG PF 455B E&C as a crossover, two layers of approximately 12 to 15µm each should be applied. Cure both layers at an energy level of 0.5Joule/cm² to obtain a good inter-coat adhesion between the first and second layer and to obtain a maximum adhesion of the crossover.

When using LOCTITE EDAG PF 455B E&C as a crossover, be sure to dry the inks printed over it within 5 minutes. Do not let the inks printed over LOCTITE EDAG PF 455B E&C air dry for extended periods of time.

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 |
| Pencil hardness | B |

**Electrical Properties**

| | |
|---|---|
| Sheet Resistivity @ 25µm, ohms/sq | $>2\times10^{9}$ |
| Breakdown voltage @ 25µm, volts AC | 2,750 |

## GENERAL INFORMATION

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

## DIRECTIONS FOR USE

1. LOCTITE EDAG PF 455B E&C is supplied ready for use and does not require dilution.
2. Stir LOCTITE EDAG PF 455B E&C prior to each use.
3. Bring product to room temperature prior to use.
4. Protect against exposure to UV sources such as daylight and fluorescent lighting. Care should be taken to avoid LOCTITE EDAG PF 455B E&C curing on the screen.

**Clean-up**

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

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**Storage**
Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.
**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**
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa = N/mm²
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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**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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