

LOCTITE EDAG PF 410 E&C

April 2023

PRODUCT DESCRIPTION

LOCTITE EDAG PF 410 E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Grey paste
Cure	Heat drying
Maximum Operating Temperature	120°C
Product Benefits	<ul style="list-style-type: none"> • Applicable with manual, semi-automatic or high speed reel-to-reel screen printing equipment • Extended screen residence time • Excellent print definition • Non-critical, flexible low temperature drying cycles • Superior adhesion to polyester film • Good abrasion resistance and hardness • Good conductivity
Application	Conductive Ink
Filler Type	Silver
Typical Assembly Applications	PET, PEN, PI

LOCTITE EDAG PF 410 E&C is designed for production of flexible circuitry. This material can be used on a variety of substrates.

TYPICAL PROPERTIES OF UNDRIED MATERIAL

Solids Content by Weight, %	74
Viscosity, Brookfield, 20 °C, mPa·s (cP):	
Speed 20 rpm	16,000
Density, kg/m ³	2,500
Theoretical coverage @ 10µm dry coating thickness, m ² /kg	15
Shelf Life @ 5 to 30°C (from date of qualification in original seal), year	1
Flash Point °C	110

TYPICAL SCREEN PRINTING PROCESS

Printing Equipment Type

- Manual
- Semi-automatic
- High speed reel-to-reel

Recommended Dry Coating Thickness

Dry Coating Thickness 6 to 12

Recommended Screen Type

Monofilament polyester screen, mesh/cm 68 to 110
Stainless steel screen, mesh/cm 90 to 154

Recommended Squeegee

Polyurethane, durometer	70 to 75
Emulsion Thickness	
Emulsion Thickness, µm	20 to 40

TYPICAL DRYING CYCLE

Recommended Drying Cycle

Conventional Air Circulated Oven:
30 minutes @ 80°C or
15 minutes @ 120°C

LOCTITE EDAG PF 410 E&C can be dried immediately after printing at temperatures between 80 to 140°C. Higher temperatures will yield lower sheet resistance and better mechanical properties.

For high speed production, jet drying, infra-red drying and drying in high speed reel-to-reel equipment can be used.

The above drying profile is a guideline recommendation. Conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer drying equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF DRIED MATERIAL

Physical Properties

Adhesion on PET, Cross Hatch, ASTM 3359, grade 5B

Electrical Properties

Sheet Resistance, Ohm/sq/25µm ≤0.02

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Mixing/Dilution

- LOCTITE EDAG PF 410 E&C is supplied ready for use and does not require dilution.
- Gently stir prior to use
- Avoid rapid stirring, as this causes air entrapment.
- Should dilution be necessary use Carbitol Acetate (CAS: 112-15-9). Henkel recommends a maximum of 10 wt%. This should be accomplished by adding solvent at 0.5 wt% intervals by weight until desired viscosity and printability is achieved.

CLEAN-UP

1. The screen and equipment can be cleaned with dilution solvent, or esters (butylacetate, propylacetate, or ethylacetate), or ketones (MEK, Acetone), or similar solvents.



STORAGE

Store product in the unopened container in a cool dry well ventilated area. Storage information may be indicated on the product container labeling.

Optimal Storage: 5 to 30°C. Storage below 5°C or greater than 30°C can adversely affect product properties.

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

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

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

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

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

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

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

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

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

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

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

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

Disclaimer

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