

LOCTITE EDAG PF 407A E&C

October 2014

PRODUCT DESCRIPTION

LOCTITE EDAG PF 407A E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Black
Filler Type	Carbon
Product Benefits	• Conductive • Screen printable • Good screen residence time • Flexible low temperature drying cycles • Good adhesion
Cure	Heat cure
Application	Conductive Ink
Operating Temperature - Continuous	105°C
Typical Assembly Applications	Printed resistors, membrane touch switches, keyboards, Heating elements, Flexible circuits and Protection against electrostatic discharge (ESD)
Key Substrates	Polyester film, Polyimide film, Polycarbonate, Paper and Cardboard

LOCTITE EDAG PF 407A E&C polymer thick film is designed for production of low voltage circuitry on polyester film and solvent sensitive substrates such as polycarbonate.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content, %	36
Viscosity, Brookfield - RVT, mPa·s (cP):	
Speed 20 rpm, @ 20°C	35,000
Density, kg/m	1,120
Theoretical coverage, m ² /kg:	
@ 10µm	23
Shelf Life @ 5 to 30°C, year:	
From date of qualification in original seal	1
Flash Point, DIN 53213, °C	47

TYPICAL SCREEN PRINTING PROCESS

Recommended Thickness	
Applied dry coating thickness, µm	6 to 10
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 90
Stainless steel screen, threads/cm	77 to 110

Printing Equipment Type

Manual
Semi-automatic
High speed reel-to-reel

TYPICAL CURING PERFORMANCE

Recommended Drying Cycle

30 minutes @ 90°C or
15 minutes @ 120°C

LOCTITE EDAG PF 407A E&C can be dried immediately after printing.

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

Dry Coating on Polyester film, dried 15 minutes @ 120°C.

Physical Properties

Adhesion, grade	5B
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Electrical Properties

Sheet Resistivity @ 25µm, ohms/sq	≤20
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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 PF 407A E&C should be thoroughly stirred prior to use. Avoid rapid stirring as this causes air entrapment..
2. Bring product to room temperature prior to use..
3. LOCTITE EDAG PF 407A E&C is supplied ready for use. Should thinning become necessary, dilute 1 to 3% by weight with Arcosolv PM-Acetate..
4. Keep product container tightly closed when not in use.
5. If a gel structure forms after extended storage, the product may be warmed slightly in a water bath (not exceeding 50°C) and stirred. Very often, stirring is enough to obtain a proper viscosity again..

CLEAN-UP

To clean screen and equipment, use 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.

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 quality department for assistance and recommendations on specifications for this product.

Conversions

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

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