Technical Data Sheet

LOCTITE® EDAG PF 455B

November 2025

PRODUCT DESCRIPTION

LOCTITE® EDAG PF 455B provides the following product characteristics:

Technology	Acrylate
Appearance	Translucent green
Product benefits	• Non-conductive • Excellent humidity resistance • Excellent printability • Fast UV cure • Excellent adhesion • Good dielectric strength
Cure	Ultraviolet (UV) / Visible light
Application	Non-conductive ink
Typical assembly applications	Insulating crossovers
Key substrates	Treated and Untreated polyester film

LOCTITE® EDAG PF 455B is a UV-curable dielectric ink with good adhesion onto treated and untreated polyester foil. LOCTITE® EDAG PF 455B is screen printable and clear. The coating will show superior humidity resistance and dielectric strength. It will be suitable for the production of crossovers with reduced risk of silver migration and high breakdown voltage. This dielectric is also available as green under the name of LOCTITE® EDAG PF 455BC.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids content, %	100
Viscosity, Brookfield #6SP, 25°C, mPa.s (cP)	
Speed 20 rpm	14,000
Density, g/cm^3	1.02
Theoretical coverage, m^2/kg	
@ 10 µm dry coating thickness	98
Shelf life @ 5 to 25°C, year	
From date of qualification in original seal	1

TYPICAL SCREEN PRINTING PROCESS

Recommended coating thickness

Dry coating thickness, 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 intwo 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 80 Watt/cm or

UV lamp 120 Watt/cm

When applying LOCTITE® EDAG PF 455B as a crossover, two layers of approximately 12 to 15 µm each should be applied. Cure both layers at an energy level of 0.5 Joule/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 as a crossover, be sure to dry the inks printed over it within 5 minutes. Do not let the ink sprinted over LOCTITE® EDAG PF 455B air dry for extended periods of time.

The above cure profiles are guideline recommendations. These 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
Pencil hardness	B

Electrical properties

Sheet resistance, 25µm, Ohm/sq	
4-point probe	not conductive
Breakdown voltage @ 25 µm, volt AC	> 2,700

GENERAL INFORMATION

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

Directions for use

1. LOCTITE® EDAG PF 455B is supplied ready for use.
2. Should dilution be necessary, use dbutyl glycol acetate (CAS: 112-07-2). Henkel recommends a maximum of 10 wt%. This should be accomplished by adding solvent at 5 wt% intervals until desired viscosity and printability is achieved.
3. Mix thoroughly before use to ensure the entire ink volume is homogenous. A slow speed propeller may be utilized to mix until product is uniform. Avoid rapid stirring as this causes air entrapment.
4. If a gel structure forms after extended storage, the product may be warmed slightly in a water bath (not exceeding 65°C) and stirred.

Clean up

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 dry location. Storage information may be indicated on the product container labeling.

Optimal storage: 5 to 30°C. Storage below 0°C or greater than 40°C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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 the specifications of this product.

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
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

Disclaimer

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