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Technical Data Sheet

LOCTITE® EDAG 423SS

April 2025

PRODUCT DESCRIPTION

LOCTITE® EDAG 423SS provides the following product characteristics:

Technology	Thermoplastic
Appearance	Dark gray
Operating temperature	105°C
Product benefits	• Applicable with manual,semi-automatic and high speed reel-to-reel screen printing equipment • Excellent screen residence time • Non-critical, flexible low temperature drying cycles • Excellent adhesion to polyester film • Compatible for use with polyester film, polycarbonate film, PVC film, paper and cardboard
Cure	Hot air drying
Application	Conductive ink
Typical assembly applications	Membrane touch switches, Printed resistors, Keyboards, Heating elements, Flexible circuits, Membrane switches and Protection against electrostatic discharge (ESD)
Key substrates	PET, PEN, PI, PVC, Paper

LOCTITE® EDAG 423SS is a conductive carbon ink, which is often used for printing contact areas, protect silver tracks from oxidation. LOCTITE® EDAG 423SS is screen printable and compatible with a large range of silver inks LOCTITE® EDAG 479SS, LOCTITE® EDAG 725A, LOCTITE® ECI 1010.

TYPICAL PROPERTIES OF UNDRIED MATERIAL

Solids content, %	36
Viscosity, Brookfield RVT, 20°C, after 15 minutes, mPa·s (cP)	
Speed 20 rpm	23,000
Density, g/cm^3	1.1
Theoretical coverage, wet product, m²/kg	
at 10µm dry coating thickness	20
Shelf life at 5 to 30°C, (package type dependent), days*	≥ 365
Flash point, DIN 53213, °C	78

*For additional information, contact your Henkel representative

TYPICAL SCREEN PRINTING PROCESS

Printing equipment type

Manual
Semi-automatic
High speed reel to reel

Recommended screen type

Monofilament polyester screen, threads/cm	61 to 90
Stainless steel screen, threads/cm	77 to 110

Recommended screen type

Polyurethane, Durometer	70 to 75

Emulsion thickness

Emulsion thickness, µm	20 to 40

Applied dry coating thickness

Applied dry coating thickness, µm	6 to 10

TYPICAL DRYING CYCLE

Recommended drying cycle

Conventional air circulated oven
30 minutes at 90°C

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

Dry Coating on polyester film dried 30 minutes at 90°C

Physical properties

Adhesion on PET, ASTM D3359, grade	5B

Electrical properties

Sheet resistance, 4-point probe, Ohm/sq/25µm	
30 min at 90°C	33
15 min at 120°C	37

GENERAL INFORMATION

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

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Directions for use

1. LOCTITE® EDAG 423SS 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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