

LOCTITE® EDAG 423SS

July 2024

PRODUCT DESCRIPTION

LOCTITE® EDAG 423SS provides the following product characteristics:

Technology	Thermoplastic
Appearance	Dark gray
Operating temperature	105°C
Product benefits	<ul style="list-style-type: none"> • 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)

LOCTITE® EDAG 423SS conductive, screen printable ink consists of very finely divided graphite particles dispersed in a thermoplastic resin. It is designed for use in the production of low voltage circuitry on polyester film.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids content, %	36
Viscosity, Brookfield, 20°C, mPa·s (cP):	
Speed 20 rpm	20,000
Density, g/cm ³	1.1
Theoretical coverage, wet product, m ² /kg	
@ 10µm dry coating thickness	20
Shelf life @ 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
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Emulsion thickness

Emulsion thickness, µm	20 to 40
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Applied dry coating thickness

Applied dry coating thickness, µm	6 to 10
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TYPICAL DRYING CYCLE

Recommended drying cycle

Conventional air circulated oven
30 minutes @ 90°C or
5 minutes @ 120°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 CURED MATERIAL

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

Physical properties

Adhesion, ASTM D3359 Method B, grade	5B
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Electrical properties

Sheet resistance, @ 25µm dry coating thickness, ohms/sq	<42
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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 423SS is supplied ready for use and does not require dilution.
2. Avoid rapid stirring as this causes air entrapment.
3. Should thinning become necessary, dilute 1 to 3% by weight with 2-butoxy ethyl acetate (butylglycol acetate).
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 equipment can be cleaned with 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. 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

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

Disclaimer

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