

LOCTITE® EDAG 6017SS

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PRODUCT DESCRIPTION

LOCTITE® EDAG 6017SS provides the following product characteristics:

Technology	Thermoplastic
Appearance	Black
Filler type	Carbon
Product benefits	<ul style="list-style-type: none"> • Screen printable • Excellent screen residence time • Flexible low temperature drying cycles • Compatible with polyester film, paper and cardboard • Good adhesion to polyester film
Operating temperature, °C	100, maximum
Cure	Heat drying
Application	Conductive ink
Typical assembly applications	Various resistive applications, Printed resistors, Heating elements, Sensing devices and Protection against electrostatic discharge (ESD)
Key substrates	PET, PEN, PI, Paper

LOCTITE® EDAG 6017SS is a flexible and conductive carbon ink specifically developed for heating applications. It shows a stable electrical resistance in 20 - 80°C range. LOCTITE® EDAG 6017SS can be blending with the non-conductive ink LOCTITE® EDAG PM 404 to adjust the electrical resistance and heater power. The coating will be compatible with the silver inks LOCTITE® ECI 1010.

TYPICAL PROPERTIES OF UNDRIED MATERIAL

Solid content, (wt%)	27
Viscosity, Brookfield RVT, 25°C, after 1 min, mPa.s (cP) Speed 20 rpm	22,000
Density, g/cm ³	1.10
Shelf life at 5 to 30°C, (from date of manufacture), year	1
Flash point, DIN 53213, °C	78
Coverage at 10µm dry coating thickness, m ² /kg wet product	12

TYPICAL SCREEN PRINTING PROCESS

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 DRYING PERFORMANCE

Recommended drying cycle

15 minutes at 120°C

Blends of LOCTITE® EDAG 6017SS and Electrodag PM-404 can be dried in conventional air circulated ovens. Higher temperatures will shorten the drying time and will lead to more stable resistance values. 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 THE DRIED MATERIAL

Physical properties

Adhesion on PET, ASTM D3359, grade	5B
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Electrical properties

Sheet resistance, 4-point probe, Ohm/sq/25µm	35
15 min at 120°C	

Blending ratios of LOCTITE® EDAG 6017SS and LOCTITE® EDAG PM-404, dried 15 min at 120°C.

EDAG 6017SS (wt%)	EDAG PM 404 (wt%)	Sheet Resistance (Ohm/sq/25µm)
100	0	35
90	10	50
80	20	70
70	30	105
60	40	170
50	50	290
40	60	675
30	70	2,160
25	75	4,500
20	80	35,000
10	90	>1 x 10 ⁹

GENERAL INFORMATION

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

1. LOCTITE® EDAG 6017SS is supplied ready for use. Should dilution be necessary, use butyl glycol acetate (CAS: 112-07-2). Henkel recommends a maximum of 10 wt%. This should be accomplished by adding solvent at 0.5 wt% intervals until desired viscosity is achieved.
2. If a gel structure forms after extended storage, the product may be warmed slightly in a water bath (not exceeding 50°C) and stirred with a mechanical stirrer. Very often, stirring is enough to obtain a proper viscosity again.
3. Blending with LOCTITE® PM 404 should be performed with a mechanical propeller mixer for the entire jar volume. Avoid rapid stirring as this causes air entrapment.

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

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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