

LOCTITE EDAG 461SS E&C

April 2020

PRODUCT DESCRIPTION

LOCTITE EDAG 461SS E&C provides the following product characteristics:

Technology	Polyester Resin
Appearance	Silver
Filler Type	Silver
Solvent	Butyl cellosolve acetate
Cure	Heat cure
Operating Temperature-Maximum	149°C
Product Benefits	• Conductive • Screen printable • Extremely flexible • Low electrical resistance • Dries at low temperatures • Good adhesion
Application	Conductive Ink
Typical Assembly Applications	ITO coated film, Membrane switches, Digitizers, Flexible circuits and Electroluminescent lamps
Key Substrates	Polyester and ITO film

LOCTITE EDAG 461SS E&C conductive ink is designed for display applications on ITO film. It consists of very finely divided silver particles dispersed in a thermoplastic resin.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content by Weight, %	75
Viscosity, Brookfield - RVT, mPa·s (cP):	
Spindle 6, speed 20 rpm	17,000
Density, kg/l	2.34
Shelf Life @ 8 to 28°C (from date of manufacture), days	365
Flash Point ASTM D93-71, Pensky-Martens	74
Closed Cup Flash Tester°C	

TYPICAL SCREEN PRINTING PROCESS

Recommended Thickness	
Dry Film, µm	10.0 to 12.5
Emulsion Thickness	
Solvent resistant emulsion, µm	20 to 37.5
Recommended Screen Type	
Monofilament polyester screen, mesh	157 to 280
Stainless steel screen, mesh	165 to 250
Recommended Squeegee	
Polyurethane or other solvent resistant material	
Polyester screen, durometer	60
Stainless steel screen, durometer	70

TYPICAL CURING PERFORMANCE Cure Schedule

30 minutes @ 71°C or
15 minutes @ 93°C or
5 minutes @ 121°C

Percent Volatiles

VOC, g/l 576

Depending on the amount of air flow, curing may be faster.

The above cure profile is a guideline recommendation. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties :

Pencil hardness	3B
Coverage @ 25µm thickness, m ² /kg	6.1

Electrical Properties:

Sheet Resistivity @ 25µm, ohms/sq	<0.02
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GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Do not expose wet ink to direct sunlight.
2. Do not freeze.
3. Keep product container tightly closed when not in use.
4. LOCTITE EDAG 461SS E&C should be thoroughly stirred prior to use. Avoid rapid stirring as this causes air entrapment..
5. LOCTITE EDAG 461SS E&C is supplied ready for use. Should thinning become necessary, dilute 5% by weight with butyl carbitol acetate..
6. If product dries too quickly in the screens, dilute the neat product 5% with butyl carbitol acetate to prolong drying time.

CLEAN-UP

To clean screen and equipment, use Methyl ethyl ketone (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.

Store in a cool, well ventilated area.

Optimal Storage : 8 to 28 °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 Technical Service Center or Customer Service Representative.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb/F}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{psi} \times 145 = \text{N/mm}^2$

$\text{MPa} = \text{N/mm}^2$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

Reference 0.3