

LOCTITE EDAG 109 E&C

August 2014

PRODUCT DESCRIPTION

LOCTITE EDAG 109 E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Black
Filler Type	
Product Benefits	<ul style="list-style-type: none"> • Fast drying • Extremely flexible • Conductive
Cure	Air dry
Application	Conductive Ink
Operating Temperature-Maximum	105°C
Typical Assembly Applications	Electronic circuitry, RFID antenna, Hearing elements and Bio and medical sensors
Key Substrates	Plastics and Paper substrates

LOCTITE EDAG 109 E&C is designed for applications using flexographic or rotogravure printing techniques. This product is fully miscible with LOCTITE EDAG PM-457 silver ink to produce a wide range of resistances.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content, %	40
Viscosity, Brookfield , mPa·s (cP):	
Speed 20 rpm, @ 25°C	2,200
Density, kg/cm ³	1,030
Theoretical coverage, m ² /kg:	
@ 10µm dry coating thickness	22
Shelf Life, from date of qualification in original seal, days	365
Flash Point , °C	14

TYPICAL DRYING CYCLE

Recommended Drying Cycle

15 to 30 minutes @ 70 to 80°C

LOCTITE EDAG 109 E&C can be dried with forced air or infrared systems. Higher temperatures for longer time will improve the performance. However, care should be taken with infrared. Too much energy can destroy the coating. Design drying rates for the maximum the substrate and production speeds can tolerate.

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	HB
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Electrical Properties

Sheet Resistivity @ 25µm, ohms/sq	≤30
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GENERAL INFORMATION

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

DIRECTIONS FOR USE

Surface Preparation

- Surfaces to be coated must be clean, dry and free of dust.

Mixing/Dilution

- Before use, the material should be mixed thoroughly using a mechanical stirrer or paint shaker until it is of uniform consistency. Check to see that no sediment remains in the bottom of the container.
- Pour in a suitable container in case dilution is required.

Application

LOCTITE EDAG 109 E&C may be applied by spray, brush or print method.

• SPRAY APPLICATION

1. If dilution is necessary, use MEK or MIBK.
2. Use a ratio of 1:1 product to diluent by weight for dilution.
3. To dilute, add solvent to LOCTITE EDAG 109 E&C and continue stirring until mixture is of uniform colour.
4. LOCTITE EDAG 109 E&C is applied using conventional padde agitated pressure tank spray systems. Recommended spray pressure is 2 to 2.5 bar with a spray gun nozzle diameter of 1 to 2 mm.
5. Small prototype runs may be sprayed with suction sup spray equipment.

• BRUSH APPLICATION

1. LOCTITE EDAG 109 E&C can be applied by brush as supplied.

• PRINT APPLICATION

1. LOCTITE EDAG 109 E&C is supplied ready for use. Should thinning become necessary, use MEK or MIBK.

Drying

- This product air dries to touch in about 10 minutes and to handle in approximately 30 minutes, depending on ambient temperatures.
- For production runs, conventional forced drying methods may be used for faster processing.

Clean-up

The equipment can be cleaned with easters (butylacetate, ethylacetate) or ketones (MIBK, MEK).

Storage

Store product in the unopened container in a cool dry well ventilated area. Storage information may be indicated on the product container labeling.

Optimal Storage: 5 to 20°C. Storage below 5°C or greater than 20°C can adversely affect product properties.

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.

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 specifications for this product.

Conversions

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

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

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

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

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

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

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

$\text{MPa} \times 145 = \text{psi}$

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

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

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

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

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Reference 0.1