

LOCTITE EDAG 440A E&C

October 2014

PRODUCT DESCRIPTION

LOCTITE EDAG 440A E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Black
Product Benefits	<ul style="list-style-type: none"> • No thinning required • Long screen residence time • Good flexibility • Fine-line printability
Cure	Heat cure
Application	Assembly
Typical Assembly Applications	Membrane keyboards and Flexible printed circuits

LOCTITE EDAG 440A E&C graphite polymer thick film material is formulated to provide conductive electronic traces in the manufacture of flexible circuitry. It is compatible and can be overprinted onto Electrodag 725A silver conductor and other Henkel products.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content by Weight, %	40
Theoretical coverage @ 25µm coating thickness, m ² /kg	3.24
Shelf Life @25 (5 to 30)°C, months, days (from date of qualification in original seal)	548
VOC, g/l	785
Flash Point - See SDS	

TYPICAL SCREEN PRINTING PROCESS

Recommended Thickness

Dried, µm	7.5 to 15
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Recommended Screen Type

Polyester screen, mesh	160 to 200
Stainless steel screen, mesh	170 to 325

Emulsion Thickness

Solvent resistant emulsion, µm	12.7 to 38
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Optimal performance is achieved when printed at a cured thickness recommended above. Many printer and print set up conditions will determine the print thickness. Best fine line results can be achieved with a stainless steel screen.

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

10 minutes @ 107°C

This product can also be cured using infrared.

Low conductivity and poor adhesion can result from undercuring.

Various time and temperature ranges can be used to fit most production environments.

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

Electrical Properties

Sheet Resistance, ohms/sq/mil	<30
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GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Surface Preparation

- Surface to be coated must be dry and free on contaminants such as oil or chemical residues.

2. Mixing/Dilution

- Ensure ink is in room temperature
- Product is ready for use but should be mixed thoroughly using a plastic spatula
- Mix smoothly from bottom of container, careful not to whip air in to the product. Using a plastic spatula will decrease the possibility of introducing plastic grindings from the container sidewalls into the product, possibly clogging the screens

Clean-up

1. To clean screen and equipment, use Methyl ethyl ketone (MEK).
2. Clean the mesh of the screen until free of all visible particles in the screen.
3. Allow screen to completely dry before using again.

Storage

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

Keep from freezing.

Optimal Storage : 25 °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.

Empty containers may retain hazardous properties.

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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The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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