

LOCTITE EDAG 820B E&C

September 2014

PRODUCT DESCRIPTION

LOCTITE EDAG 820B E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Silver
Filler Type	Silver
Product Benefits	• Conductive • Screen printable • Fine-line printable • Excellent flexibility • Fast cure
Cure	Heat cure
Application	Conductive Ink
Operating Temperature-Maximum	121°C
Solvent	Carbitol acetate
Typical Assembly Applications	Membrane switches, PC computer keyboards and Notebook computer keyboards

LOCTITE EDAG 820B E&C screen printable polymer thick film ink is designed for use on membrane keyboard printing. This adhesive is compatible with other EDAG E&C conductive polymer thick film and inks. To achieve low cost material for ESD grid applications, blending with EDAG PF008 (SS 24939) is recommended.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content by Weight, %	59
Viscosity, Brookfield CP51, mPa·s (cP):	
Speed 50 rpm, @ 25°C, 5 minutes	6,000
Density, kg/l	1.84
Shelf Life @ 5 to 27 °C (from date of qualification in 365 original seal) days	
Coverage @ 25µm, m ² /kg	5.61
Printability, µm:	
Lines	200
Spaces	125
Flash Point, Tag Closed Cup Flash Tester, °C	107

TYPICAL SCREEN PRINTING PROCESS

Recommended Thickness	
Dry Film, µm	6 to 10
Emulsion Thickness	
Solvent resistant emulsion, µm	12 to 25
Recommended Screen Type	
Monofilament polyester screen, mesh	160 to 300
Stainless steel screen, mesh	165 to 325
Recommended Squeegee	
Polyurethane or other solvent resistant material	
Polyester screen, durometer	60 to 70
Stainless steel screen, durometer	70 to 80

TYPICAL CURING PERFORMANCE

Recommended Drying Cycle

20 minutes @ 120°C

Percent Volatiles

VOC, g/l 745

Curing at 150°C may further improve properties.

Low conductivity and poor adhesion can result from undercuring.

This product can also be cured using infrared.

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

After screen printing and curing for 20 minutes @ 120°C

Physical Properties :

Flexibility, % change in resistance	13.6
Resistivity change after 5 creases with 5 kg weight used on crease	
Adhesion, % change in resistance	2.1
90° tape pull with 3M 600 series tape	

Electrical Properties:

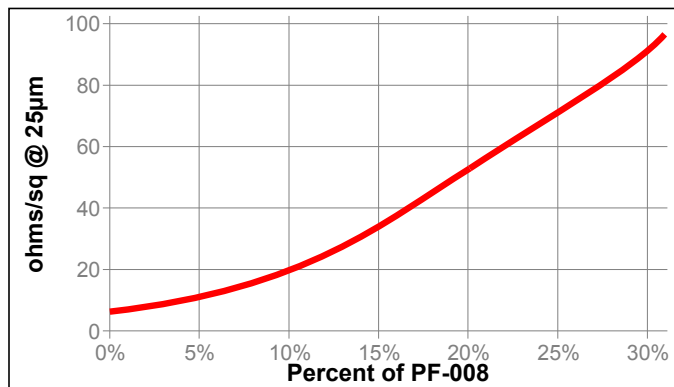
Sheet Resistivity @ 25µm, ohms/sq	0.015
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GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Do not freeze.
2. Keep product container tightly closed when not in use.
3. Mix thoroughly with plastic spatula or mechanical stirrer 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, which could damage the screen.
4. LOCTITE EDAG 820B E&C can be blended with PF-008 Electrodag® SS24939 carbon ink to achieve custom resistance. PF-008 was designed only for blending with LOCTITE EDAG 820B E&C and should not be used for overcoating.
5. LOCTITE EDAG 820B E&C is supplied ready for use. Should thinning become necessary, dilute 5% by weight with carbitol acetate..



Clean-up

- To clean screen and equipment, use Methylethylketone (MEK), MIBK, Isopropanol 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 : 5 to 27 °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.

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

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

Disclaimer

Note:

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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Reference 0.2