

LOCTITE EDAG PM 406 E&C

October 2014

PRODUCT DESCRIPTION

LOCTITE EDAG PM 406 E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Silver
Cure	Heat cure
Operating Temperature-continuous	105°C
Product Benefits	<ul style="list-style-type: none"> • Conductive • Screen printable • Fast drying • Very low sheet resistance • Good adhesion • Good flexibility • Non-critical, flexible low temperature drying cycles
Application	Conductive Ink
Typical Assembly Applications	Antennae (13.56 MHz)
Key Substrates	Polyester, Paper, PVC and ABS

LOCTITE EDAG PM 406 E&C conductive screen printable ink consist of very finely divided silver particles in a thermoplastic resin . It can be applied with coating thicknesses as high as 10 to 20 µm.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content, %	79
Viscosity, Brookfield , 20 °C, mPa·s (cP):	
Speed 20 rpm	17,500
Density, kg/cm ³	3,060
Theoretical coverage @ 10µm dry coating thickness, m ² /kg	10
Shelf Life @ 4 to 8 °C (from date of qualification in original seal), year	1
Flash Point , °C	78

TYPICAL SCREEN PRINTING PROCESS

Printing Equipment Type

Manual
Semi-automatic
High speed reel-to-reel

Recommended Screen Type

Monofilament polyester screen, threads/cm 68 to 110
Stainless steel screen , threads/cm 90 to 154

Recommended Squeegee

Polyurethane , durometer 70 to 75

Emulsion Thickness

Emulsion Thickness , µm 20 to 40

Applied Dry Coating Thickness

Applied Dry Coating Thickness, µm 10 to 20

TYPICAL DRYING CYCLE

Recommended Drying Cycle

30 minutes @ 90°C or
15 minutes @ 120°C

LOCTITE EDAG PM 406 E&C can be dried immediately after printing at temperatures between 50 to 140°C. The higher the temperature, the lower the sheet resistance and the better the mechanical properties.

If applied to PVC foil, the drying temperature need to be limited to 70 °C max.

For high speed production, jet drying and drying in high speed reel-to-reel equipment can be successfully 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 CURED MATERIAL

Physical Properties

Adhesion , ASTM D3359 Method B, grade 5B

Electrical Properties

Sheet Resistivity , ohms/sq
@ 25 µm dry coating thickness <0.015

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. LOCTITE EDAG PM 406 E&C is supplied ready for use and does not require dilution.
2. If dilution is necessary, use 2-butoxy ethyl acetate (butylglycol acetate).
3. Stir LOCTITE EDAG PM 406 E&C prior to each use.
4. Avoid rapid stirring as this causes air entrapment.

Clean-up

To clean screen and equipment, use 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.

Optimal Storage : 4 to 8 °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

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

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

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

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

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

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

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

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

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

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

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

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

Disclaimer

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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