Technical Data Sheet

LOCTITE EDAG PM 404 E&C

September 2014

PRODUCT DESCRIPTION

LOCTITE EDAG PM 404 E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Black
Cure	Heat cure
Operating Temperature - Continuous	100°C
Product Benefits	• Non-conductive • Screen printable • Flexible resistive • Excellent screen residence time • Flexible low temperature drying cycles • Good adhesion
Application	Non-conductive Ink
Typical Assembly Applications	Various resistive applications, Printed resistors, Heating elements, Sensing devices and Protection against electrostatic discharge (ESD)
Key Substrates	Polyester film, Paper and Cardboard

LOCTITE EDAG PM 404 E&C screen printable ink is specifically designed for blending with EDAG 6017SS E&C printable ink to provide a range of resistance values.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content, %	37.5 to 40.0
Viscosity, Brookfield , mPa·s (cP):	
Speed 20 rpm, @ 20ºC	10,000 to 25,000
Density, , Kg/cm³	1,270
Theoretical coverage, m² /kg:	
@ 10µm dry coating thickness	14
Shelf Life @ 5 to 30ºC , year:	
From date of qualification in original seal	1
Flash Point DIN 53213, ºC	78

TYPICAL SCREEN PRINTING PROCESS

Blends of LOCTITE EDAG PM 404 E&C and Electrodag® 6017SS™ are applied by standard screen printing techniques.

Emulsion Thickness

Emulsion Thickness , µm	20 to 40

Recommended Squeegee

Polyurethane , durometer	70 to 75

Recommended Screen Type

Monofilament polyester screen, threads/cm	61 to 90
Stainless steel screen , threads/cm	77 to 110

Printing Equipment Type

Manual
Semi-automatic
High speed reel-to-reel

TYPICAL CURING PERFORMANCE

Recommended Drying Conditions

5 to 10 minutes @ 120°C

Blends of LOCTITE EDAG PM 404 E&C and EDAG 6017SS can be dried in conventional air circulated ovens.

Higher temperatures will shorten the drying time and will lead to more stable resistance values.

For high speed production, jet drying, infra-red drying and drying in high speed reel-to-reel equipment can be used.

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

Adhesion , grade	5B

Electrical Properties

Sheet Resistivity
Blending ratios of LOCTITE EDAG PM 404 E&C and EDAG 6017SS, Dried 5 minutes @ 120ºC, ohms/sq

Electrodag 6017SS (% by weight)	Electrodag PM-404 (% by weight)	@ 25µm dry coating thickness
100	0	35
90	10	50
80	20	70
70	30	105
60	40	170
50	50	290
40	60	675
30	70	2160
25	75	4500
20	80	35,000
10	90	> 1e9

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. LOCTITE EDAG PM 404 E&C is supplied ready for use

2. When mixing with Electrodag™ PM-404™, use a stirrer.

3. If dilution is necessary, use 2-butoxy ethyl acetate (butylglycol acetate).

4. If a gel structure forms after extended storage, the product may be warmed slightly in a water bath (not exceeding 50ºC) and stirred. Very often, stirring is enough to obtain a proper viscosity again

Clean-up

To clean screen and equipment, use Methylethylketone (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 : 5 to 30 °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

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa = N/mm²
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = 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 0.1