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LOCTITE

Technical Data Sheet

LOCTITE EDAG PF 021 E&C

September 2014

PRODUCT DESCRIPTION

LOCTITE EDAG PF 021 E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	clear
Operating Temperature-Maximum	204ºC
Product Benefits	• Fast UV cure • Prevents silver migration • Physically protects SMD • Process ease • Dot dispensable
Cure	Ultraviolet (UV) light
Application	Encapsulant
Key Substrates	Polyester, Polycarbonate film and FR-4

LOCTITE EDAG PF 021 E&C encapsulating photopolymer is designed to secure low profile surface mount devices (SMD) to rigid or flexible substrates. It is particularly effective for use as a physical and environmental protection of the mounted device.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content by Weight, %	100
Viscosity, Brookfield CP51, 25 °C, mPa·s (cP): Speed 5 rpm	11,500
Theoretical coverage, sq ft/gal: @ 10 µm coating thickness	1,600
Shelf Life @32°C, year (from date of qualification in original seal)	1
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Recommended UV Cure

Light Dose, Joule/cm²	0.4 to 1.0

For thicknesses >2.0 mils, a longer wavelength bulb is required e.g. Fusion "D". UV measurements were made with an EIT radiometer.

Percent Volatiles

VOC, g/l	0

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

Hardness, Shore A	80
Pencil hardness	2B
Elongation, %	176

Electrical Properties

Dielectric Constant , ASTM D150-87	3.24
Dielectric Strength , ASTM D149-91, volts	750

TYPICAL PERFORMANCE OF CURED MATERIAL

Tensile Strength	N/mm² (psi)	7.58 (1,100)

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. **Mixing/Dilution**
   - Product is ready for use but should be mixed thoroughly using a plastic spatula. (Syringe-packed material needs no mixing).
   - Mix smoothly from bottom of container , being careful not to whip air into the product.
2. **Application**
   - LOCTITE EDAG PF 021 E&C should be applied in a glob over the entire surface if small devices, or along the outside leads of large devices.
   - Its viscosity is designed to conform to the device and flow out over the substrate just prior to UV curing.
   - Dot dispensing equipment should be selected based on the exact application, i.e., device size and production speed.
3. **Cleanup**
   - Uncured resin may be cleaned with Isopropanol, cellosolve acetate and similar solvents.

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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: 32°C. Storage below 32°C or greater than 32°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
(°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

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Reference 0.1