

LOCTITE EDAG 437 E&C

October 2014

PRODUCT DESCRIPTION

LOCTITE EDAG 437 E&C provides the following product characteristics:

Technology	Thermoplastic
Appearance	Copper
Operating Temperature	-40 to 95 °C
Product Benefits	<ul style="list-style-type: none"> • High conductivity • Ease of use • Burnish resistant • Excellent environmental resistance • High conductivity per μm dry coating • Compatible with commonly used plastics • Stable electrical properties after heat cycling
Cure	Room temperature cure
Application	Conductive coating
Typical Assembly Applications	Reflective coating on parabolic antennas and Plastic housing of consumer electronics and medical equipments

LOCTITE EDAG 437 E&C EMC shielding coating is designed to provide electromagnetic compatibility (EMC) in electronic equipment housing.

It is an extremely conductive copper coating that provides excellent shielding against radiated electro-magnetic interference (EMI) and protection against electrostatic discharge (ESD).

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content by Weight, %	63.5
Viscosity @ 20 °C, mPa·s (cP):	
Speed 20 rpm	4,500
Density, kg/cm ³	1,650
Theoretical coverage, m ² /kg:	
@ 10 μm coating thickness	23
Shelf Life @ 5 to 30°C, days	365
Flash Point, °C	23

TYPICAL PROPERTIES OF CURED MATERIAL

On Lexan panels, airdried overnight

Physical Properties

Attenuation @ 50 μm , dB	50 to 70
Adhesion	5B
Pencil hardness	>9H

Electrical Properties

Sheet Resistivity, ohms/sq: @ 1 mil dry coating thickness	<0.5
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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

- Thoroughly mix LOCTITE EDAG 437 E&C before dilution. Normally, the product is diluted with MEK.
- Recommended dilution ratio(s) as follows:
By Volume: 5 part(s) product to 4 part(s) solvent
By Weight: 5 part(s) product to 2 part(s) solvent
- Complicated parts, such as those molded from solvent sensitive plastics (ABS, Polystyrene and Polycarbonate), are very prone to stress cracking. In such cases, replacing about 15% of the MEK with Isobutanol or Diacetone Alcohol (DAA) provides a suitable alternative.

3. Application

- LOCTITE EDAG 437 E&C should be applied by spray using conventional propeller agitated pressure pot spray systems.
- Small prototype runs may be sprayed with well-mixed product, using suction cup spray equipment.
- A nominal 50 to 75 μm dry coating thickness is recommended for good shielding performance. However, a thinner coating may be acceptable, depending on the shielding requirements of the device being protected.
- Avoid dry spraying for maximum adhesion and conductivity.

4. Drying

- LOCTITE EDAG 437 E&C dries to touch in about 5 minutes; to handle in approximately 30 minutes, depending on ambient temperature and coating thickness.
- LOCTITE EDAG 437 E&C reaches full coating properties after air drying overnight.

5. Cleanup

- For high volume production where masks are used to prevent coating certain areas, the masks can be cleaned with esters (butylacetate, ethylacetate) or ketones (MIBK, MEK) solvents.
- Spray or mixing equipment may be cleaned with the same solvents.

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 : 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.

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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Reference 0.1