



ELECTRODAG 440 AS

May 2011

PRODUCT DESCRIPTION

ELECTRODAG 440 AS provides the following product characteristics:

Technology	Thermoplastic
Appearance	Nickel
Operating Temperature	-40 to 95 °C
Solvent	Methylethylketone (MEK)
Product Benefits	<ul style="list-style-type: none"> • High conductivity • Ease of use • Over-coatable • High coverage • High conductivity per kilo of wet product • High conductivity per μm dry coating • Improved stability against sedimentation • Compatible with commonly used plastics
Cure	Room temperature cure
Application	Conductive coating
Typical Assembly Applications	Reflective coating on parabolic antennas and Plastic housing of consumer electronics and medical equipments

ELECTRODAG 440 AS EMC shielding coating is designed to provide electromagnetic compatibility (EMC) in electronic equipment housing. It is an extremely conductive nickel coating that provides excellent shielding against radiated electro-magnetic interference (EMI) and protection against electrostatic discharge (ESD).

TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids Content (), %	68
Viscosity @ 20 °C, mPa·s (cP):	
Speed 20 rpm	5,750
Density, kg/cm ³	2,025
Theoretical coverage, m ² /kg:	
@ 10 μm coating thickness	17
Shelf Life @ 5 to 30°C, year	1
Flash Point, °C	17

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 coating thickness	<0.5

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 ELECTRODAG 440 AS before dilution. Normally, the product is diluted with MEK.
- Recommended dilution ratio(s) as follows:
By Volume: 1 part product to 1 part 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

- ELECTRODAG 440 AS 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

- ELECTRODAG 440 AS dries to touch in about 5 minutes ; to handle in approximately 20 minutes, depending on ambient temperature, coating thickness and diluent.
- Best coating properties will be achieved after 4 to 16 hours air drying, depending on coating thickness and ambient temperatures.
- Forced drying at 60 to 70 °C for 20 to 30 minutes is possible

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

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

Note

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Tento produkt kupte: BeMi, s.r.o., Meziříčská 1559, Bystřice pod Hostýnem 768 61
 tel: 602 412 625, email: bemi@bemi.cz, www.bemi.cz

Americas
 +1.888.943.6535

Europe
 +44.1442.278.000

Asia
 +86.21.3898.4800

For the most direct access to local sales and technical support visit: www.henkel.com/electronics