

Distributed for Acheson Colloids By:
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Electrodag® SP-017

Catalog Numbers: 60830Q, 60830G

Silver-Plated,
Copper Conductive EMI Coating

DESCRIPTION

Electrodag SP-017 is a flagship Electrodag highly conductive coating designed to provide assistance in achieving electromagnetic compatibility with plastic enclosures. This high solids, solvent-based product was formulated to provide an extremely conductive coating with excellent adhesion/cohesion properties.

TYPICAL PROPERTIES (as supplied)

Pigment	: silver-plated copper
Binder	: acrylic
Solids content by weight	: 40.7%
Diluent	: MEK, SB-1, or SB-10 (2:1 by volume, product to solvent)
Density	: 10.1 lbs/gal (1.21 kg/l)
Theoretical coverage	: 295 sq ft/gal @ 1 mil (5.98 m ² /kg @ 25 μm)
Viscosity	: 1200 mPa·s (Brookfield #3 spindle, 20 rpm RVT)

TYPICAL PROPERTIES (as sprayed)

VOC	: 6.03 lb/gal (723 g/l)
Drying time	: 20 minutes air dry then 30 minutes at 160°F (71°C), or 24 hours air dry
Recommended dry film thickness	: 1.5-2.0 mils (37.5-51.0 μm)

TYPICAL PROPERTIES (when dried)

Resistivity	: 0.075 ohms/sq/mil
Attenuation	: 75 dB @ recommended DFT
Maximum service temperature	: 200°F (93°C)

APPLICATION DETAILS

Mixing/Dilution

Electrodag SP-017 is easily mixed on a paint shaker or by stirring before use. Check to make sure all solids are in suspension prior to use. It is recommended that this material be diluted 2:1 (product to solvent) by volume with MEK, but this dilution ratio can be adjusted up or down to meet the applicator's needs. A small addition of PM acetate will slow the drying process while the addition of acetone will increase the speed of drying.

The information given and the recommendations made herein are based on our research and are believed to be accurate but no guaranty of their accuracy is made. In every case, we urge and recommend that purchasers, before using any product in full scale production, make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purposes under their own operating conditions. THE PRODUCTS DISCLOSED HEREIN ARE SOLD WITHOUT ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED. No representative of ours has any authority to waive or change the foregoing provisions but, subject to such provisions, our engineers are available to assist purchasers in adapting our products to their needs and to the circumstances prevailing in their business. Nothing contained herein shall be construed to imply the non-existence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of this patent. We also expect purchasers to use our products in accordance with the guiding principles of the American Chemistry Council® program.

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**APPLICATION
DETAILS**
(continued)

Spray Application

Conventional propeller-agitated pressure pot systems can be used for production. Highest efficiency can be achieved using HVLP spray guns due to minimization of overspray losses.

A nominal 1.5-2.0 mil (37.5-51.0 μm) dry film coating thickness is recommended for good shielding performance. However, a thinner or thicker coating may be acceptable depending on the shielding requirements of the device being protected. Avoid dry spray for maximum adhesion and conductivity.

During humid days, the addition of no more than six fluid ounces per gallon of butyl cellosolve or diacetone alcohol to **Electrodag SP-017** will eliminate blushing. Blushing is characterized by a white tint to the dried surface.

Drying

Electrodag SP-017 dries to the touch in about five minutes and can be handled in approximately 10 minutes, depending on ambient temperatures. It may be force dried beginning with a 20-minute air flash then 30 minutes at 160°F (71°C). Force drying gives excellent results and a slightly lower resistance reading than air drying.

Quality Control

Measure resistance after coating is cured. Digital ohmmeter measurements using industry standard test probes at constant spacing and pressure avoids confusion and is highly recommended.

Mask Cleaning

Mask can be cleaned with solvent or solventless mask washers. Overspray can be removed from plastics with a blend of 40% acetate and 60% IPA.

**STORAGE/SHIPPING
HANDLING**

Shelf life for this product is 6 months from date of qualification under original seal. Keep from freezing. Keep container tightly closed when not in use. Store in a cool, well ventilated area. Keep away from heat, sparks, and open flame. Protect material from direct sunlight. Ground and bond containers when transferring materials. Empty containers may retain hazardous properties. Follow all MSDS/label warnings even after container is emptied.

**APPLICATION
ASSISTANCE**

Acheson's **Application Specialists** are available to assist you in production start-up with **Electrodag SP-017**. For more information, contact Acheson Colloids Company, (800) 255-1908, or visit our website at www.achesonindustries.com for the Acheson global location nearest you.

HEALTH & SAFETY

Flammable. Harmful if swallowed, inhaled, or absorbed through skin. May cause eye irritation. Wash thoroughly after handling. Keep away from heat, sparks, and open flame. Keep container tightly closed when not in use. Use with adequate ventilation. Avoid breathing vapor. See Acheson's Material Safety Data Sheet for proper first aid instructions.

NOTE

Electrodag is a registered trademark of Acheson Industries, Inc.

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