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Electrodag® 18DB70X

VOC Exempt*
Silver Conductive Coating

DESCRIPTION

Electrodag 18DB70X is one in a series of Acheson conductive coating materials used for EMI/RFI shielding protection. This material was specially formulated for use in geographic areas that are demanding the use of low VOC products. **Electrodag 18DB70X** also provides low ohms at very thin dry film thickness on plastic electronic equipment housings. It exhibits excellent environmental aging stability with superior scratch/mar resistance while providing excellent long-term shielding and grounding properties.

ADVANTAGES

- **Low VOC** – 0.5 lb/gal (59.6 g/l)
- **Excellent adhesion and cohesion** – Passes ASTM D3359-93 crosshatch tape test required to meet UL approval
- **Excellent mar and scratch resistance** – Coating integrity and conductivity stays intact at seams and grounding points.
- **Low ohms at thin film build** – Eliminates problems with film-build on vertical walls and reduces mask washes per part.
- **Good flow characteristics** – Wet paint flows around corners and into hard-to-reach spots for smooth uniformity.
- **Excellent aging stability** – Shielding integrity stays intact in harsh environments.

TYPICAL PROPERTIES (as supplied)

Pigment	: silver
Binder	: acrylic
Solids content by weight	: 50.8% ± 0.5%
Density	: 13.9 lbs/gal (1.67 kg/l)
Theoretical coverage	: 318 sq ft/gal @ 1mil (4.69 m ² /kg @ 25 µm) (7.44m ² /l @ 25µm)

TYPICAL PROPERTIES (as sprayed)

VOC	: 0.5 lb/gal (59.6 g/l)
Diluent	: acetone (recommended starting at 1:1 ratio by volume)
Drying time	: 5 min air dry to touch/10 min to handle then 5 minutes at 180°- 225°F (82°-107°C) or air cure for 24 hrs
Recommended thickness	: 0.5-1.5 mils dried (12.5 to 37.5 µm)

TYPICAL PROPERTIES (when dried)

Sheet resistance	: 0.015 ohms/sq/mil (25 µm)
Attenuation	: 75 dB

*This product was formulated using materials that have been classified as exempt by the United States Environmental Protection Agency. It is recommended that before using this product, you contact your local and state regulatory agencies for confirmation.

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.

PRODUCT DATA SHEET

**APPLICATION
DETAILS****Mixing/Dilution**

Electrodag 18DB70X is easily mixed, 10-15 minutes, on a paint shaker or by stirring before use. Check to be sure that all solids are in suspension prior to use. This material is recommended to be reduced 1:1 by volume using acetone, but alternative ratios can be used according to requirements needed.

Application

Electrodag 18DB70X can be sprayed using conventional or HVLP systems with recirculating HVLP being the preferred method due to the high transfer efficiency. Robotic application of **Electrodag 18DB70X** is optimized with recirculation of the paint from the pot through the gun and back via a pump delivery system.

A nominal 0.5-1.0 mils (12.7-25.4 μm) dry film coating thickness is recommended for good shielding and abrasion performance. However, a thinner coating may be acceptable, depending on the shielding requirements of the device being protected. Avoid dry spray for maximum adhesion and conductivity.

Drying

Electrodag 18DB70X dries to the touch in 5 minutes; to handle in approximately 10 minutes, depending on ambient temperature. It can be force dried for 5 minutes at 180°-225°F (82°-107°C) or air dried for 24 hours.

Quality Control

Measure resistance after coating is fully cured. Digital ohmmeter measurements using the same type of test probes at constant spacing avoids confusion and is highly recommended.

Mask Cleaning

Masks can be cleaned with solvent or non-solvent mask washers. Overspray can be removed from plastics with MEK or 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 18DB70X**. 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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