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Electrodag® 451SS

Ultraviolet Curable Dielectric Coating

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DESCRIPTION

Electrodag 451SS is a screen printable, UV curable dielectric coating designed to be used as an insulator for printed circuitry. The excellent intercoat adhesion with Electrodag silver and carbon coatings provides superior creasability and eliminates cracking of conductive traces near mechanical connectors.

TYPICAL APPLICATIONS

- Insulating coating
- Tail coatings for membrane switches
- Spacers

ADVANTAGES

- Excellent flexibility
- Superior abrasion resistance
- Adheres well to both treated and untreated polyester film
- Provides superior creasability

TYPICAL PROPERTIES (of wet product)

Pigment	: magnesium silicate
Binder	: urethane acrylate
Solids content by weight	: 100%
Density	: 9 lbs/gal (10.8 kgs/l)
Viscosity	: 9,000 mPa·s (cps) (#5 spindle, 20 rpm Brookfield RVT)
Color	: translucent green;
Flash point	: > 215°F (>102°C) Tag closed cup
VOC	: none

TYPICAL PROPERTIES (as cured)

Coverage	: 1,600 sq ft/gal @ 1 mil (41.29 m ² /kg @ 25 μm)
Maximum service temperature	: 350°F (177°C)
Dielectric constant	: 5.09 (ASTM D-150)
Dielectric strength	: 1500 volts AC @ 1mil (ASTM-D-149 Method A)

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.

APPLICATION DETAILS

Mixing/Blending/Dilution

This product is supplied ready for use and **should not be diluted**. Stir **Electrodag 451SS** gently prior to each use, mixing well from the bottom of the container, avoiding excessive heat or air entrapment.

Application

Screen size : 160-300 mesh polyester
Emulsion : diazo sensitized direct photo film
Film thickness : 160 mesh 1.1 mil (27.5µm)
200 mesh 0.7-0.8 mil (17.5-20.0 µm)
300 mesh 0.4 mil (10.0 µm)
Recommended film thickness : 0.8-1.0 mil (20.0-25.0 µm) for
crossovers. Use either one pass with
160 mesh or two passes with a 300
mesh polyester screen

Curing

Curing @ 1 mil (25 µm)
thickness : 0.3-0.6 joule/cm² (as measured with an
EIT Radiometer) - Run a cure ladder
test to optimize cure for your particular
equipment. Use a standard medium
pressure mercury "H" bulb.

Cleanup

Uncured resin may be cleaned up with MEK isopropyl alcohol, or other similar solvents.

STORAGE/SHIPPING HANDLING

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. Shelf life is 12 months from date of qualification under original seal. 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 451SS**. 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.