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Electrodag® 725A-6S-54

Advanced Performing PTF Material for Membrane Keyboards and Flexible Printed Circuits

DESCRIPTION

This screen printable, polymer thick film material is an industry standard for the production of high reliability membrane keyboards, membrane touch switches and other flexible circuits. The material's conductivity and cure performance allows wide processing latitude and provides high performance at reasonable costs. In addition to its high conductivity, the material is formulated to provide excellent flexibility and excellent adhesion to the wide variety of substrates, both treated and untreated, used in the manufacture of these electronic circuits. **Electrodag 725A** is offered in a range of viscosity variations to suit many screen printing processes and is fully blendable with products Electrodag 440A or Electrodag 440B, graphite, to achieve a range of resistance values.

ADVANTAGES

- Low Electrical Resistance
- Excellent Adhesion
- No Thinning Required
- Easy To Use
- Excellent Flexibility
- Good Printability
- Good Screen Residence Time
- Long Shelf Life With Refrigeration

TYPICAL PROPERTIES (of wet product)

Color	: silver
Viscosity	: 13,000 mPa·s (RVT Brookfield #6 spindle, 20 rpm, sample temp. controlled to 86°F/30°C)
Total solids	: 60% (typical)
Density	: 17.01 lbs/gal (2.13 kg/l)
Flash point	: 212°F (100°C)
VOC	: 6.96 lb/gal (835 g/l)
Theoretical coverage	: 480 sq ft/gal/mil (5.52 m ² /kg)

TYPICAL PROPERTIES (as cured)

Properties obtained after screen printing and curing at 225°F (107°C) for 10 minutes.	
Resistivity	: < 15 milliohms per square @ 1 mil
Flexibility	: 5 flexes (Number of flexes until resistivity changes to greater than 50% of initial value)
Adhesion (Tape Pull)	: < 5% change in resistance
Hardness	: 2H
Printability	: 10 mil lines and 10 mil spaces

APPLICATION DETAILS

Mixing

Product is ready for use, but should be mixed thoroughly using a plastic spatula. Mix

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PRODUCT DATA SHEET

smoothly from the bottom of the container, being careful not to whip air into the product. Using a plastic spatula will decrease the possibility of introducing plastic grindings from the container sidewalls into the product, possibly clogging screens. Insure ink is at room temperature.

Screen Type

Optimal performance of this product is achieved when printed at a cured thickness of 0.3-0.6 miles. Many printer and print set-up conditions will determine the print thickness. Using a polyester screen with 160-200 mesh opening or a stainless steel screen with 170-325 mesh opening will achieve the best results. 0.5 – 1.5 mils of a solvent-resistant emulsion are recommended.

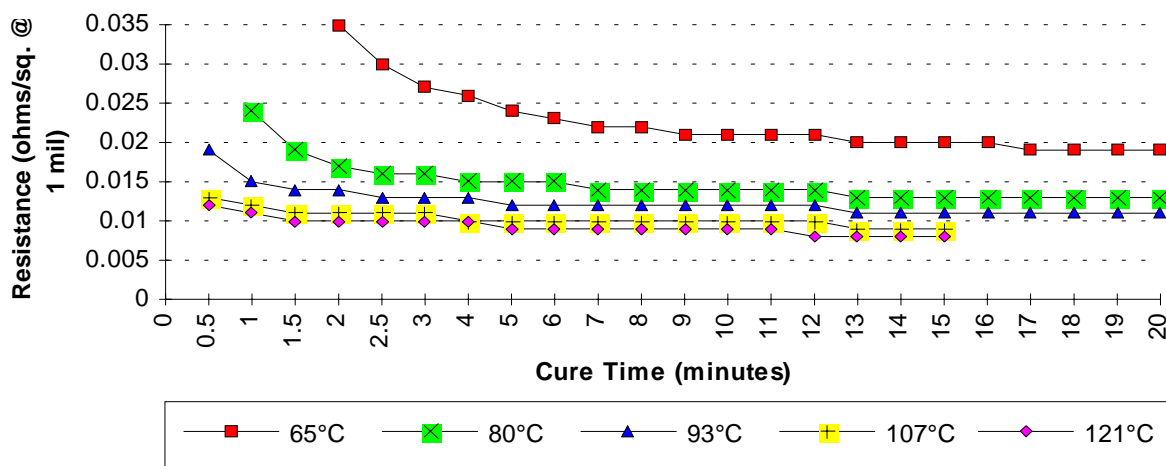
Cure Schedule

For optimum performance cure this material a minimum of 10 minutes at 225°F (107°C). Various time/temperature ranges can be used to fit most production environments. This product can be cured under infrared conditions. Low conductivity and poor adhesion performance are symptomatic of under-curing.

Clean Up

MEK (methyl ethyl ketone) or other suitable solvents. Clean the mesh of the screen until free of all visible particles in the screen. Allow screen to completely dry before using again.

**725A Cure Temperature Profile
Batch Oven Cured**



STORAGE/SHIPPING HANDLING

Shelf life for this product is 12 months from date of shipment under original seal. Keep from freezing. Keep container tightly closed when not in use. Store in a cool, well ventilated area. 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 725A-6S-54**. For more information, contact Acheson Colloids Company, (810) 984-5581, fax (810) 984-1446, web.mail@nstarch.com, or visit our website at www.achesonindustries.com.

HEALTH & SAFETY

Harmful if swallowed, inhaled, or absorbed through skin. If ingested, consult a physician immediately. Wash thoroughly after handling. 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.