

SunTronic IME Conductive Silver AST6820-HC

Product Description

SunTronic PTF Silver AST6820-HC is a screen printable thermally cured conductive ink specifically designed for in-mold electronics applications. AST6820-HC exhibits high heat resistance, which is especially important for molding with polycarbonate resins.

AST6820-HC may be printed on a variety of substrates including PVC, polycarbonate, polyester and some acrylic substrates. In combination with Sun Chemical's IME dielectrics (UV curable DSU4700 and DSU4800 or thermally curable DST4826 dielectric), AST6820-HC can be used to create multilayer circuitry and more complex switch designs. AST6820-HC is also compatible with the major graphic ink product lines supplied to IMD industry.

Processing and Handling Guidelines

PRINTING

AST6820-HC is supplied as ready-to-use ink. The ink should be given a thorough power mix immediately prior to use. Hand mixing by spatula may not be sufficient. If thinning is required, proceed with caution in small steps (~1%) and use a maximum of 3% of Thinner ER-SOLV22 by weight. AST6820-HC is suitable for use on hand-, semi-automatic or fully automatic screen printing machines. Polyester or Stainless screens with mesh count 255-420 threads/inch (100-165 threads/cm) can be used depending on desired ink film thickness and resolution. ER-SOLV22 should be used for screen cleaning followed by acetone.

Relevant Safety Data Sheets (SDS) must be read carefully prior to using this product.

CURING / DRYING

Complete drying is important to avoid outgassing and delamination during subsequent steps of 3D forming and injection molding. Drying temperature may range from 82-150°C (180-302°C) depending on temperature tolerance of the substrate. Drying time is 20-60 min depending on chosen temperature. Lower sheet resistance can be typically achieved at higher drying temperatures and/or longer drying times.

Optimum curing / drying conditions should be established for particular equipment used by the customer.

STORAGE AND SHELF LIFE

Storage in a refrigerator ~5°C (41°F) is recommended and will assist in maintaining ink properties for up to 6 months for unopened container.

Typical Properties

Pigment	Silver
Binder	Thermoplastic
Viscosity (Brookfield CAP @ 25°C)	80 - 90 Poise
Sheet Resistivity, mΩ/sq/mil	<20 mΩ/sq/mil
Solids	70-72%

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