UNION INKS

Product Information

UV CURABLE ALKALI SOLUBLE ACID ETCH RESIST BLUE

99-461

TIL NO : 781

PROPERTIES

99-461 UV Curing Alkali Soluble Acid Etch Resist Blue is to be used as etching resist in printed circuit boards production. The cured ink film has excellent hardness and this makes it most suitable for fine line printing as well as for double side printing. This inks: -

- Withstands acid etchants (ferric and cupric chloride).
- Is easily removed in 3-5% sodium hydroxide or soda solutions.
- Provides utmost definition and reproduction fidelity for its thixotropic properties.
- Features excellent adhesion and mechanical resistance.
- Excellent hardness of 3 - 5 H (Sheen Pencil Hardness)
- Is almost odourless and has low irritating index.

TECHNICAL DATA

- Finish in semi-gloss blue for easy inspection.
- Specific weight: 1.3 at 25^0 C.
- Viscosity (Brookfield Viscometer, spindle 7 speed 50rpm at 28^0 C): 180 ($\pm$ 10%) poise.
- Solids content: 100 %
- Flash point: 100^0 C
- Curing speed: about 6-7 metres per minute with a GUC 384 (3x300W/inch UV Metal Halide lamps)
- Shelf life: 6 months from manufacturing date at room temperature of 25^0 C.

SURFACE PREPARATION

Oxidation or other contaminants like grease or oil may lower ink adhesion. It is therefore necessary to clean the surface by wet mechanical brushing followed by thorough drying to get good ink adhesion.

SCREENS

Stencils may be either direct, indirect or direct/indirect with either polyester monofilament 100-120T/cm (120-34) or stainless steel 300-325 mesh.

PRINTING

Carefully stir ink prior to use. Use well sharpened squeegees, 75 - 80 shore hardness.

CURING

Using UV dryers equipped with 3 x 300 watts per inch metal halide or mercury vapour lamps, ink printed with polyester 120-34 per cm, curing is achieved at about 6 to 7 metres per minute or the energy required to cure is about 1200 millijoules (UVV wavelength) using UV Integrator Model UV.

STRIPPING

Ink film is easily dissolved by spraying or dipping the circuit board in caustic soda based (NaOH) solutions up to 3-5% either cold or warm at 40^0 C. Process time in soda solution takes about 5-10 seconds. Wash off with a strong spray of water.

WASHING UP

Uniwash 99-SW113 is recommended.

PROCESS NOTES

Direct or prolonged exposure to light sources with UV contents should be avoided. Commercially available fluorescent lamps may be used in the work area, provided that they are fitted with a diffuser. Avoid contact with skin and eyes. If the ink comes into contact with the skin, promptly wash off with water and soap, do not use solvents. Work area has to be effectively ventilated.