UNION INKS

Product Information

UV CURABLE ALKALI PLATING / ETCH RESIST
99-440

TIL NO : 703A

PROPERTIES

99-440 UV Curing Alkali Soluble Etch Resist Blue is to be used as Plating / Etching resist in printed circuit boards production. This inks :-

- withstands both acid etchants (ferric and cupric chloride) and ammonical etchants up to pH 9.0.
- as Plating Resist provides outstanding resistance to most plating baths.
- is easily stripped in 3-5% sodium hydroxide or soda solutions.
- provides utmost definition and reproduction fidelity for its thixotropic properties.
- allows printed boards to be stacked without sticking problems.
- features excellent adhesion and mechanical resistance.
- is almost odourless and has low irritating index.

TECHNICAL DATA

- finish in semi gloss blue for easy inspection.
- specific weight : 1.3 at 25 degrees C.
- viscosity (Brookfield Viscometer, spindle 7 speed 50rpm at 28 degrees C) : 160 poise or 250 poise.
- solids content : 100 %
- flash point : 100 degrees C
- curing speed : about 4-5 metres per minute with a 3x200W/inch UV lamps
- shelf life : 6 months from manufacturing date at room temperature of 25 degrees 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 or stainless steel 300-325 mesh. Whenever ammonical etching solutions are used, it is necessary to increase the thickness of ink deposit and consequently, its resistance to etching solution.

PRINTING

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

CURING

Using UV dryers equipped with 3 x 200 watts per inch metal halide or mercury vapour lamps, ink printed with polyester 120T per cm, curing is achieved at about 4.5 to 5 metres per min. or the energy required to cure is about 1200 millijoules using UV Integrator Model UV.

STRIPPING

Ink film is easily stripped by spraying or dipping the circuit board in caustic soda based (NaOH) solutions up to 3-5% either cold or warm at 40 deg. 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.