



UNION INKS

Product Information

UV CURABLE ALKALINE ETCH RESIST

99-441

TIL NO: 708

PROPERTIES

99-441 UV Curing Alkaline Etching Resist is to be used as Etching resist in printed circuit boards production. This inks:

- Withstands both acid etchants (ferric and cupric chloride) and alkaline etchants up to pH 9.0.
- 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 Viscosimeter, spindle 7 speed 50rpm at 28 degrees C): 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 alkaline 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.

WARNING

These informations are given in good faith, but without any guarantee as the printing conditions of our inks are beyond our control. In the event of complaints, the ink supplier may replace free of charge the unused ink, declining any other responsibilities.