



# CIRCUIT HU

## APPLICATIONS

Printed circuit boards.

## GENERAL CHARACTERISTICS

- Dual-Cure emulsion resistant to UV-cured and solvent-based inks
- High solids content and medium viscosity for producing low Rz stencils with excellent print definition on any mesh
- Fast exposing with wide exposure latitude
- Easy to reclaim

## DIRECTIONS FOR USE

Handle under yellow safelight or low wattage tungsten lights. Avoid exposure to daylight, quartz / halogen lamps, cool white fluorescent lamps or discharge lamps.

## Sensitizing and Mixing

Prepare Diazo as per instructions on the bottle. Add the entire contents to the emulsion and mix thoroughly until a smooth consistency is obtained. Write the date of sensitizing on the label and then cover the sensitized emulsion and let stand for a few hours to enable air bubbles to escape. Store sensitized emulsion in cool conditions and use within one month for best results.

## Mesh Preparation and Degreasing

Degrease and abrade new mesh with SaatiChem Direct Prep 1 in order to optimize stencil adhesion; dry screen and store in a dust free, dry environment prior to coating. For further applications, thoroughly degrease mesh prior to use with SaatiChem Direct Prep 2.

## Coating

Using a high quality scoop coater or coating trough, apply one or two coats to the substrate side of the screen, followed by one or two coats on the squeegee side. For a thicker stencil, apply additional coats to the squeegee side prior to drying. For a higher quality stencil with a minimal increase in stencil thickness, apply one or two additional coats to the substrate side of the screen after the initial coats have dried.

## Drying and Storage

Thoroughly dry the coated screen at a maximum temperature of 104° F (40° C) in a dust free, dark or yellow light area, with the substrate side facing down to optimize stencil quality. Coated screens should be stored in a dust free, dry, safelight environment.

## Exposing

Ensure that all surfaces, emulsion, film and glass are free of dust to minimize pinholes.

Contact emulsion side of positive with the substrate side of the screen and secure in position before placing the screen in a suitable vacuum frame. Many variables, such as lamp type and age, distance from lamp to screen, mesh type and coating thickness, can affect exposure time. Perform an exposure test with an exposure calculator to determinate correct exposure time for a complete cure.

## Developing

Wet both sides of screen with a strong, finely divided spray of water and continue washing out until all image area are fully open. Rinse both sides of screen and dry thoroughly before use. A properly exposed and developed screen will not leave residue on the squeegee side.

## Reclaiming

Remove all ink residues immediately after printing with an appropriate solvent. Remove stencil with SaatiChem Remove 1, 2, 4, 5 or 10 and a pressure washer. For stains and ghost images, use SaatiChem Remove 3 followed by a pressure washer.

## HEALTH AND SAFETY

Before using, refer to appropriate material safety data sheets.

## PROBLEM SOLVING

### Poor coating quality

- Properly clean, degrease and rinse screen to remove all residues and trace of chemicals
- Properly and evenly tension fabric
- Clean and ensure defect edge on scoop coater

To receive the Material Safety Data Sheet (MSDS), please send an e-mail to: [MSDS@saatichem.com](mailto:MSDS@saatichem.com)  
To get more information about SaatiPrint and SaatiChem please visit our official Web Site: [www.saati.com](http://www.saati.com)  
To buy emulsions on-line (USA only) please visit our dedicated Web Site: [www.emulsionstore.com](http://www.emulsionstore.com)

Products manufactured in Italy, USA and China  
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#### **Poor detail or difficulty washing out image**

- Ensure emulsion and coated screens are handled in safelight conditions only
- Ensure a minimum vacuum of 0.66 bar (500 mmHg or 20 in Hg) on vacuum gauge for optimum contact of positive
- Optimize exposure time and use only high quality film positives
- Do not store sensitized emulsion or coated screen at high temperatures

#### **Emulsion falls off, extreme pinholes or severe stencil breakdown during printing**

- Ensure that damp screens are not being exposed
- Only expose screens with an even and consistent coating thickness
- Ensure that stencil has not been severely underexposed
- Ensure mixed emulsion is not too old, has been correctly sensitized and has not been stored at high temperature

#### **Difficulty reclaiming screens**

- Not reclaimable once catalyzed
- Optimize exposure time and properly rinse squeegee side of screen during developing to remove all trace of residue, especially when using higher mesh count dyed fabric

#### **STORAGE**

When sealed in the original container and stored in cool conditions, SaatiChem products will maintain their original properties for one year from the date of production.

#### **PACKAGING**

Available in one and five kilogram containers. In North America, available in one, five and fifty US gallon containers. Packaged with associated Diazo.

#### **WARRANTY AND LIMITED REMEDY**

The directions, recommendations, and specifications contained in this Technical Data Sheet are meant as a guide to the use of the product and shall not bind the company. Product specifications are subject to change without notice.

The following is made in lieu of all other expressed or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose:

All SaatiChem manufactured liquid products are warranted to be free of defects in materials and manufacture and to meet the specifications stated in SaatiChem's applicable Product Bulletin. SaatiChem will replace or refund the price of any SaatiChem manufactured liquid product that does not meet this warranty within the applicable warranty period.

The remedies are exclusive. In no case shall SaatiChem be liable for any other direct or indirect damage or loss, including without limitation any incidental, special, or consequential damages, or any material costs or labor charges incident to the removal or replacement of any mesh, screen, nk, substrate, finished graphic or any other item.

To receive the Material Safety Data Sheet (MSDS), please send an e-mail to: [MSDS@saatichem.com](mailto:MSDS@saatichem.com)  
To get more information about SaatiPrint and SaatiChem please visit our official Web Site: [www.saati.com](http://www.saati.com)  
To buy emulsions on-line (USA only) please visit our dedicated Web Site: [www.emulsionstore.com](http://www.emulsionstore.com)

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USA: Ph.: 1.877.296.7697 (Toll-free US & Canada) or Ph.: +1.847.296.7697 - e-Mail: [info.US@saatichem.com](mailto:info.US@saatichem.com)  
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