

## POLYCOL DISCHARGE

### DESCRIPTION:

POLYCOL DISCHARGE is a high solids, very-fast exposing, pre-sensitized, blue SBQ emulsion specially formulated for printing with discharge, water-based, and plastisol inks

POLYCOL DISCHARGE allows printers to get screens on press faster by eliminating the need for diazo sensitizer or stencil hardeners.

Two features set POLYCOL DISCHARGE apart from other SBQ emulsions used for printing water-based and discharge inks:

- 1) Adding diazo sensitizer, a common practice with other emulsions to increase resistance and durability, is no longer required.
- 2) Use of stencil hardeners may also no longer be required. Most discharge printers automatically apply these hardeners as insurance against stencil breakdown.

Test results show that POLYCOL DISCHARGE can run up to 14 hours on press with no breakdown, and no use of diazo or hardeners.

**NOTE:** for maximum water-based or discharge ink resistance, be sure screens are extremely dry at the time of exposure. Also, select the longest possible exposure time to enhance durability and to avoid pre-mature stencil breakdown.

POLYCOL DISCHARGE's high solids content provides printers with quick stencil build up.

High resolution and good mesh bridging combined with its good exposure latitude make it suitable for fine detail printing.

### SENSITIZING:

Pre-sensitized -- ready to use.

### MESH PREPARATION:

To achieve a good stencil, the mesh must be degreased with a commercial degreaser such as KIWO Degreaser 1:20 or KIWO Ultra Prep, and should be free of dirt, dust, ink residues and ghost images Rinse the screen thoroughly using low water pressure to remove any degreaser remaining on the screen and inside surfaces of the frame.

### COATING PROCEDURE:

POLYCOL DISCHARGE has excellent coating properties on all mesh counts commonly used for textile printing. It is formulated to achieve optimum stencil thickness for most printing applications with a simple 1-1 or 2-1 coating technique using a round edged coating trough. This will reduce screen coating times and costly labor time.

Always start on the substrate side of the screen to fill the mesh openings; then finish on the squeegee side to build up the emulsion coating to the desired thickness. The correct coating technique for your specific process *must be determined through coating tests*.

Contact KIWO for more specific coating techniques.

### DRYING OF THE COATED SCREEN:

Dry screens horizontally, substrate side down in complete darkness, or under safelight conditions.

Many variables affect drying times such as: temperature, relative humidity, airflow, and coating thickness The screen must be dried thoroughly before exposing to achieve highest resistance to ink and ink cleaners

A temperature of 86°-104°F (30°-40°C) at a relative humidity of 30% -40% and moderate airflow are optimum conditions. Drying at room temperature and in uncontrolled conditions may lead to inconsistent results and varying screen resistance.

### EXPOSURE:

Expose with ultra-violet light at a 320 – 380 nm wavelength. A metal halide lamp provides the best results. Due to the many variables that determine the actual exposure time, accurate exposure times cannot be given. The following examples are offered as a guide only

#### Lamp: 5000-Watt metal halide at 40" (1m) distance:

156/62 tpi (60/62 tpcm) yellow mesh, coating technique 1-1.

Exposure time: approximately 51 seconds.

305/34 tpi (120/34 tpcm) yellow mesh, coating technique 1-1.

Exposure time: approximately 10 seconds.

The correct exposure time for your equipment and mesh selection *must be determined through exposure tests* using a stepped exposure test or an exposure calculator such as the KIWO EXPO CHECK.

Under-exposed screens feel slimy on the squeegee side during developing. At correct exposure time, the screen is not slimy. Overexposure leads to loss of detail. Correctly exposed screens will withstand high tapwater pressure during washout.

Contact KIWO if you have further questions regarding exposure time and developing techniques.

### DEVELOPING / WASHOUT:

Develop the screen using full tap water pressure with a medium to fine spray pattern. Water temperature can range from lukewarm to cold. If the emulsion is thoroughly dried and properly exposed, one can use a high pressure washer up to 1500 psi on fan spray setting at a minimum of 12 –18 inches distance to improve consistency of developing, and to speed screen processing time.

Wet both sides of the screen, then rinse primarily from the substrate side of the screen. Conduct a final rinse from the squeegee side to remove any remaining residue. Vacuum off