

## DP-450

### ONE-COMPONENT PHOTOPOLYMER EMULSION FOR TEXTILE PRINTING

**DP-450** is pre-sensitized and formulated to resist both aqueous and plastisol inks for the printing of imprinted sportswear and textiles. Red in color, **DP-450** has a viscosity of approximately 2600 mPas. Solids content (unsensitized): 39%.

#### INSTRUCTIONS

##### **Step 1: PREPARE THE FABRIC**

Used or surface treated fabric need only be degreased using **Magic Mesh Prep**, **Screen Degreaser Liquid No. 3** or dilute **Screen Degreaser Concentrate No. 33**. (Mechanical abrasion, an option for new fabric that is not surface treated, increases the surface area of fabric for a better mechanical bond of the stencil, increasing printing run length. Use **Microgrit No. 2** before degreasing. The abrading and degreasing steps can be combined with **Ulanogel 23**.) A degreaser, **Magic Mesh Prep** also serves as a wetting agent and antistatic treatment. Mesh treated with **Magic Mesh Prep** can be coated with emulsion more evenly and will transfer ink more readily during printing. Rinse the screen thoroughly with water after preparation. Dry the screen fabric completely following the degreasing rinse before coating it with **DP-450**.

##### **Step 2: COAT THE SCREEN**

Because **DP-450** is ready-to-use, work with it under yellow safelight conditions. Method 1: Apply one coat of emulsion on the printing side, then one coat on the squeegee side. Method 2: Apply two coats on the printing side, then two coats on the squeegee side, wet-on-wet. After each coating, rotate the screen 180°. Method 3: Follow Method 2. Then, after drying the screen, apply two additional coats on the printing side, wet-on-wet. Dry the screen again.

##### **Step 4: DRY THE SCREEN**

Dry multicoated screens horizontally, printing side down, with warm, filtered air up to 104° F. (40° C.) in a commercial dryer. Use a dehumidifier in the screen storage area, if possible.

##### **Step 5: DETERMINE THE OPTIMAL EXPOSURE TIME**

Make a Step Wedge Test (an instructional video for doing so is available in the "Support" section of the Ulano Web site: [www.ulano.com](http://www.ulano.com)), or use the **Ulano ExpoCheck**—carried through to actual printing—to determine optimum exposure time. Optimum exposure is indicated:

- At that exposure time when the emulsion first reaches maximum color density.
- The squeegee side emulsion is hard and not slimy.
- The print best duplicates the positive *at the level of resolution that the job requires*.

##### **Step 6: WASHOUT**

Wet both sides of the screen with a gentle spray of cold water. Then spray the printing side forcefully until the image areas clear. Rinse both sides with a gentle spray until no soft emulsion is left on the squeegee side, and no foam or bubbles remain. Use a wet vacuum to remove excess water.

##### **Step 7 (optional): POST HARDEN THE STENCIL WITH HARDENER D OR HARDENER X**

##### **Step 8: BLOCKOUT AND TOUCHUP**

**Blockout option 1:** Before drying and exposing the coated screen, use excess emulsion to coat the open mesh between the stencil and frame.

**Blockout option 2:** After exposure and washout, dry the screen. Apply **Screen Filler No. 60** or **Extra Heavy Blockout No. 10**.

**Touchup Option 1:** Use excess emulsion and re-expose the screen. **Touchup Option 2:** Thin **Screen Filler No. 60** or **Extra Heavy Blockout No. 10** with water and apply to the stencil with an artist's brush. Dry thoroughly before printing.

##### **Step 9: STENCIL AND HAZE REMOVAL**

Remove ink from the screen using **Eco-Wash 160**, **All-Purpose Ink Wash**, or the solvent or solvent blend recommended by the ink manufacturer. Use **Screen Degreaser Liquid No. 3** to help remove ink and solvent residues that might impair the action of the stencil remover. Brush **Stencil Remover Liquid No. 4** or **Stencil Remover Paste No. 5** on both sides of the screen. Do not let the stencil remover dry on the screen. Wash the screen with a forceful spray of water. A commercial power spray may be necessary to remove the stencil completely. Use **Walk Away Haze Remover** or **Haze Remover No. 78** remove ink and haze residues, if necessary.

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#### SUGGESTED EXPOSURES:

**DP-450** stencils were exposed at a distance of 1 meter (≈ 40 inches) using a 5,000 watt metal halide lamp.

Polyester, yellow: 77 threads/cm. (≈ 196/inch); thread diameter, 55µ. 2X printing side, 1X squeegee side. Approx. 30 seconds.

Polyester, white: 51 threads/cm. (≈ 130/inch); thread diameter, 80µ. 2X printing side, 2X squeegee side. Approx. 40 seconds.

**STORAGE:** In the container: 1 year at 20-25° C.; Coated screens: 4 weeks (at 20-25° C in total darkness). Note: in storage, coated emulsion can absorb moisture from the air; therefore, we recommend a second drying prior to the exposure. 115dm

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