

Ultimate™ 758

PREMIER QUALITY DUAL-CURE FORMULA PROMOTES LIGHT COLUMNIZATION AND CONSISTENT SQUEEGEE- AND PRINTING-SIDE IMAGE AREA ASPECT RATIOS; FULLY COMPATIBLE WITH ADVANCED SURFACE BRIGHTENERS; IDEAL FOR DEMANDING INDUSTRIAL AND ELECTRONICS PRINTING

Ultimate 758 is a premier quality diazo-photopolymer (dual-cure) emulsion formulated to provide unequalled printed image properties for the most exacting (30-micron lines and spaces) industrial printing and electronics manufacturing applications, including LCD panels, touch screens, solar cells, mobile phone panels and lenses, etc. **Ultimate 758** is formulated to promote light columnization and more consistent image area aspect ratios between squeegee- and printing side image areas, in addition to having superb acutance. **Ultimate 758** is recommended for use with high mesh counts, including stainless steel up to 196 threads /cm. (500 threads/inch). It has excellent solvent resistance and can be decoated easily. **Ultimate 758**'s high solids content (35% sensitized) provides good stencil build per coat, excellent mesh bridging, and fast drying. Sensitized viscosity: 6,000 - 8,000 centipoise. **Ultimate 758** is blue in color.

INSTRUCTIONS

Step 1: PREPARE THE FABRIC

Stainless steel mesh: Degrease stainless steel mesh with **Screen Degreaser Liquid No. 3** or dilute **Screen Degreaser Concentrate No. 33**.

Polyester mesh: 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.

Step 2: SENSITIZE THE EMULSION

As a dual-cure emulsion, **Ultimate 758** is partially sensitized; therefore, it must be handled under yellow light. Dissolve the diazo sensitizer powder by adding lukewarm water up to the shoulder of the bottle. Shake well. Pour the fully dissolved sensitizer into the emulsion. Stir with a clean, broad, flat plastic or stainless steel blade or spatula until the emulsion is uniform in color. Close the container. Wait at least 8 hours for the emulsion to de-bubble. Write the date of sensitizing on the label.

Step 3: COAT THE SCREEN

Coat screens with a round-edged coating trough. Add face coats, at least one from the printing side and one from the squeegee side, using a sharp edged coating trough. We recommend that **Ultimate 758** be used with an advanced brightener for better mesh bridging, to lower the Rz value, to improve surface resistance to solvents, and to decreased color leaching.

Step 4: DRY THE SCREEN

Dry thoroughly in a horizontal position, 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. *Note that Ultimate 758 screens can be pre-coated and stored for several days (in a dark, dry, cool environment; or wrapped in black plastic) while awaiting production orders.*

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 Ulanog Web site: www.ulano.com), or use the **Ulanog 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: STENCIL 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. Use **Walk Away Haze Remover** or **Haze Remover No. 78** remove ink and haze residues, if necessary.

EXPOSURE:



Technical Data Sheet

stainless steel mesh, 400 threads per inch (157 threads /cm.), coated with a round-edged coating trough (2X on the printing side and 3 X on the squeegee side) with EOM (emulsion over mesh thickness) of 4µm: optimal exposure = 60 – 65 seconds with a 5KW metal halide lamp at 1 meter (40 inches) distance.

polyester mesh, yellow mesh, 380 threads per inch (150 threads /cm.), coated with a round-edged trough (2X on the printing side and 3X on the squeegee side): optimal exposure 60 – 65 seconds with a 5KW metal halide lamp at 1 meter (40 inches) distance.

EXPOSURE VARIABLES

Distance Factors

0.5 m = 0.25

0.7 m = 0.49

1.0 m = 1.0

2.0 m = 4.0

High Humidity Factor

1.3 – 1.8

STORAGE:

Unsensitized: 1 year

Sensitized: 2- 3 weeks (at 20-25°C)

Storage of coated screens: 2 – 3 weeks (at 20-25° C in total darkness)

Note: During the storage of the coated screens, the emulsion can absorb moisture from the air; therefore, we recommend another drying prior to the exposure.

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