

Trifecta

SBQ- DUAL CURE TEXTILE EMULSION; PRESENSITIZED FOR USE WITH WATER-BASED, DISCHARGE AND PLASTISOL INKS, NO SENSITIZER OR HARDENING NEEDED*

Trifecta is a ready-to-use, extremely fast exposing and durable, violet-colored SBQ-dual cure direct emulsion for imprinted sportswear printing with plastisols, including post-phthalate formulations. If properly exposed **Trifecta** resists nearly all newest textile water-based and discharge inks during short to medium print runs. For longer printing runs, high resolution demand jobs and more aggressive inks, Trifecta stencils should be post exposed. Properly prepared **Trifecta** stencils **do not require any sensitizers or hardeners to withstand the most aggressive textile inks on the market**. All the Trifecta stencils require to obtain durability is sufficient UV-light for exposure and post-exposure.

Trifecta is formulated for compatibility with stationary and scanning CTS (computer-to-screen) exposure sources, including LED-based units. For maximum resolution and wider exposure latitude, yellow mesh usage is recommended with conventional exposure systems and with CTS exposure units.

Trifecta features fairly high viscosity (6500 centipoise at 25° C.) which provides good coating control, even on coarse mesh. Its high solids content facilitates fast drying, good buildup of EOM per coating stroke and, thus, good printed edge definition.

*In the rare cases, where 10,000 prints or more is required with aggressive ink media, diazo or chemical hardening may be used.

INSTRUCTIONS

Step 1: PREPARE THE MESH

Used or surface treated mesh need only be degreased using **Magic Mesh Prep** or **Eco Degreaser 1:20**. (Mechanical abrasion is an option for new fabric that is not surface treated. It increases the surface area of fabric for a better mechanical bond of the stencil, increasing printing run length. Abrading and degreasing can be combined in one step with **Ulanogel 23**.) Rinse the screen thoroughly with water. Dry the screen thoroughly.

Step 2: OPTIONAL SENSITIZING

Trifecta is pre-mixed and pre-sensitized. If needed, optional diazo (to be requested separately) can be used. For gallons –C10-D diazo, for quarts – C62 diazo can be used.

Step 3: COAT THE SCREEN

Handle **Trifecta** and coated screens under yellow safe light conditions.

Method 1: Utilizing thicker edge of coating through, apply two coats of emulsion on the printing side to achieve even emulsion sheeting, than one coat on the squeegee side. Dry the screen thoroughly. Method 1 due to the high solids of emulsion is sufficient for majority of printing jobs. For thicker coating use 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°.

For lower Rz and sharper printing use Method 3: Follow Method 2 (above). Then, after drying the screen, apply two additional coats on the printing side, wet-on-wet.

Step 4: DRY THE SCREEN.

Dry coated screens thoroughly in a horizontal position, printing side down, at room temperature in a dirt- and dust-free area. Use a fan to speed drying. If using a commercial dryer, dry the screen with warm, filtered air, up to 104° F. (40° C.) If humidity is above 40% RH in the room, use a dehumidifier in a drying area. Unexposed stencils have great affinity to moisture. Residual and re-absorbed moisture will prevent a screen from reacting to light properly.

Step 5: CALCULATE THE APPROXIMATE EXPOSURE TIME

Refer to the Base Exposure Table (reverse side). Base Exposure Time X Exposure Variable Factors = Approximate Exposure Time.

Step 6: MAKE A STEP WEDGE TEST

Make a Step Wedge Test (an instructional video for doing so is available in the “Support/Info” section of the Ulano Website: www.ulano.com) or use exposure calculator —carried through to actual printing—to determine your optimum exposure time. Optimum exposure is indicated:

■ At that exposure time when the squeegee side of the wet stencil first reaches its maximum color density and color of the stencil does not appear to be “milky” or whitish. (This is best observed while the stencil is still wet following the washout.) ■ There is no suggestion of softness or sliminess on the squeegee side emulsion after processing the stencil. ■ For water-based and discharge ink, post-expose fully developed and dry stencil from the squeegee side for the triple the time of initial optimal exposure.

Step 7: WASHOUT THE STENCIL

After exposure, wet both sides of the screen with a gentle spray of cold water. Then spray from the printing side until the image areas clear. Pressure washer on the fan spray of a distance about 12" off the screen from the printing side can be used to expedite the washout. Rinse both sides of the screen with a gentle spray until no soft emulsion is left on the squeegee side, and no foam or bubbles remain. Use wet vacuum to remove excess water. Dry the screen thoroughly before printing or post-exposure.

Step 8: BLOCKOUT and TOUCHUP

Blockout Option 1: Before drying and exposing the coated screen, use excess emulsion from the coating step to cover the blockout area.

Blockout Option 2: For non-water based-inks, 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:** For non-water-based inks, use **Screen Filler No. 60** or **Extra Heavy Blockout No. 10** thinned with water.

Step 9: STENCIL AND HAZE REMOVAL

Use **All-Purpose Ink Wash**, or the least powerful ink diluent necessary, to remove all ink remaining in the screen. 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. Rinse both sides of the screen gently to avoid splash-backs, then wash the screen with a forceful spray of water. If needed, use **Walk Away Haze Remover** or **Haze Remover Paste No. 78** to remove ink and haze residues.

BASE EXPOSURE TABLE For 120 threads/cm. (305/in.) **YELLOW** polyester or nylon at 100cm. (40 in.) exposure distance.

LIGHT SOURCE	COATING METHOD		
	1	2	3
Metal Halide			
1000 watts	36 sec.	99 sec.	135 sec.
2000 watts	18 sec.	50 sec.	68 sec.
3000 watts	12 sec.	33 sec.	45 sec.
4000 watts	9 sec.	26 sec.	33 sec.
5000 watts	8 sec.	21 sec.	27 sec.
Stationary LED*			
Various depending on the manufacture	12 sec	23 sec	26sec
*(as LED units vary in spectrum and intensity output, the recommended base exposure time may deviate widely)			
Fluorescent Tubes**			
40 watts	2 min	5 ½ min.	9 min.

**Base exposure times are for unfiltered black light, or super diazo blue tubes at 4 – 6 in. (10 – 15 cm.) exposure distance. For plant-light, filtered black light, and "daylight" fluorescent tubes, use at least double the exposure time.

EXPOSURE VARIABLES

Multiply the above base exposure times by *all* factors and variables that apply.

White fabric (not recommended): multiply exposure by 0.7
 Fabric finer than 130 threads/cm. (330 threads/inch): multiply by 0.7 – 0.9
 Fabric coarser than 110 threads/cm. (280 threads/inch): multiply by 1.1 – 1.7
 Relative Humidity above 50%: multiply by 1.5 – 2.0
 Added diazo: multiply by 1.6 – 1.8

DISTANCE FACTORS

20 inches /50 cm.	0.25	44 inches /110 cm.	1.21
24 inches /60 cm.	0.36	48 inches /120 cm.	1.44
28 inches /70 cm.	0.49	52 inches /130 cm.	1.69
32 inches /80 cm.	0.64	56 inches /140 cm.	1.95
36 inches /90 cm.	0.81	60 inches /150 cm.	2.25
40 inches /100 cm.	1.00	72 inches /180 cm.	3.20

HANDLING: Trifecta should be handled under yellow safelight conditions to avoid pre-exposure.

STORAGE: 12 months under temperatures above 40°F but below 70°F. Coated screens 4 weeks at 20 - 25° C. with humidity below 30%RH in total darkness.

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