

Platinum™

PURE PHOTOPOLYMER (SBQ), ANTI-HALATION TEXTILE EMULSION; PRESENSITIZED AND PREMIXED FOR PLASTISOLS; WITH ADDED DIAZO, USE WITH WATER-BASED AND DISCHARGE INKS

Platinum is a ready-to-use, SBQ-photopolymer direct emulsion for imprinted sportswear printing with plastisols, including aggressive post-phthalates. With anti-halation chemistry, **Platinum** can be used with less costly white mesh without the closing-up of fine lines and details. With the addition of its optional diazo, **Platinum** resists water-based and discharge inks. Its high viscosity (12,000 – 14,000 centipoise at 25° C.) provides good coating control, even on coarse mesh. Its high solids content ($\approx 42\%$) facilitates fast drying, good buildup of EOM per coating stroke and, thus, good printed edge definition. **Platinum** is formulated for compatibility with CTS (computer-to-screen) exposure, and automated washout and reclaiming equipment. Used with plastisols, **Platinum** does not require any sensitizers or additives; it is presensitized and premixed. **Platinum**'s grey color, provides high color contrast for easy stencil inspection.

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 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. Use **Microgrit No. 2** before degreasing. Abrading and degreasing can be combined in one step with **Ulanogel 23**.) Rinse the screen thoroughly with water.

Step 2: ADD DIAZO SOLUTION FOR WATER RESISTANCE

If printing with discharge or water-based inks, mix diazo with water then add to **Platinum**. Add diazo C62 to 28-ounce units; C68-D to 1-gallon units; and C69-D to 5-gallon units. Handle **Platinum** under yellow safe light conditions.

Step 3: COAT THE SCREEN

Method 1: Apply one coat of emulsion on the printing side, then one coat on the squeegee side. Dry the screen thoroughly.

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 (above). Then, after drying the screen, apply two additional coats on the printing side, wet-on-wet.

Step 4: DRY THE SCREEN

Dry multicoated screens (Methods 2 or 3) 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.). Use a dehumidifier in the drying area, if possible.

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" section of the Ulano Website: www.ulano.com) or use the **Ulano ExpoCheck**—carried through to actual printing—to determine your optimum exposure time. Optimum exposure is indicated:

■ At that exposure time when the emulsion first reaches its maximum color density, and the edges of the positive do not "resolve." (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. ■ The print best duplicates the test positive *at the level of resolution that the job requires*.

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. 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. Blot excess water from the printing side with newsprint (unprinted newspaper stock). **Platinum** functions well with automated washout equipment.

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.

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Step 9: STENCIL AND HAZE REMOVAL

Use **Eco-Wash 160, 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. **Platinum** works well with in-line decoating equipment. 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.) white polyester or nylon at 100cm. (40 in.) exposure distance.

LIGHT SOURCE		COATING METHOD		
		1	2	3
Carbon Arc				
	110 amps	18 sec.	55 sec.	73 sec.
Metal Halide	1000 watts	30 sec.	82 sec.	112 sec.
	2000 watts	15 sec.	41 sec.	56 sec.
	3000 watts	10 sec.	27 sec.	36 sec.
	4000 watts	8 sec.	21 sec.	27 sec.
	5000 watts	6 sec.	17 sec.	22 sec.
Pulsed Xenon				
	2000 watts	75 sec.	3 ¾ min.	5 min.
	8000 watts	19 sec.	56 sec.	77 sec.
Mercury Vapor				
	2000 watts	20 sec.	56 sec.	72 sec.
Fluorescent Tubes*				
	40 watts	100 sec.	4 min.	7 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.

Dyed fabric is unnecessary with **Platinum** but, if used, multiply exposure by 1.5 – 2.0

Fabric finer than 130 threads/cm. (330 threads/inch): multiply by 0.7 – 0.9

High heat and humidity: multiply by 1.3 – 1.8

Added diazo: multiply by 1.4 – 1.6

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.	3.2

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

STORAGE: 18 months

Coated screens 4 weeks at 20 - 25° C. in total dark

813dm; rev. 1, 614dm