



295FAST

FAST-EXPOSING. DURABLE TEXTILE EMULSION

295FAST is formulated for high-production textile printing using plastisol inks. Featuring a solids content of 41%, good resolution and edge definition, and excellent mechanical resistance, **295FAST** exposes in half the time of traditional diazo textile emulsions. Its vibrant pink color allows for both easy inspection and on-press registration. **295FAST** is supplied with diazo sensitizer in syrup form for faster and surer mixing.

INSTRUCTIONS

Step 1: PREPARE THE FABRIC

Used or surface-treated fabric need only be degreased using **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**.)

Step 2: SENSITIZING

Dissolve the diazo sensitizer by adding lukewarm water up to the shoulder of the diazo bottle. Shake it well. Wait 15 minutes for bubbles to disperse. Pour the fully dissolved sensitizer into the emulsion. Stir with a clean broad, flat, plastic or stainless steel instrument until the emulsion is uniform in color. Close the container. Wait at least one hour for the sensitized emulsion to debubble. Write the date of sensitizing on the emulsion container label.

Step 3: COATING 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°. Dry the screen thoroughly. Method 3: Follow Method 2 (above). 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 (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. Avoid high humidity. Under humid conditions, dry the coated screen with warm, filtered air, up to 104°F. (40°C.) in a commercial dryer. Use a dehumidifier in the drying area, if possible.

Step 5: STORAGE

Unsensitized emulsion can be stored for up to 1 year. Sensitized emulsion can be stored for 3 – 6 weeks at room temperature; up to 3 months in a refrigerator. Store coated screens in a cold, dry, completely dark area until exposure.

Step 6: CALCULATE EXPOSURE

Refer to the Base Exposure Table. Base Exposure Time X Exposure Variable Factors = Approximate Exposure Time.

Step 7: STEP WEDGE TEST

Calculate five test exposures—two below and two above the Approximate Exposure Time. Tape test positive to screen. Expose screen for shortest exposure time to be tested. Mask 1/5 of positive and expose to arrive at next shortest exposure time. Repeat until five exposures are made, to arrive at the longest exposure time. Make print from the stencil and compare it to the test positive. Optimum exposure is indicated by:

- No outline of the positive or darkening of the emulsion color is observable if the exposure is increased.
- Squeegee side emulsion is hard and not slimy. ■ Print best duplicates test positive at the required level of resolution.

Step 8: WASHOUT

Wet both sides of the screen with a gentle spray of cold water. Then spray forcefully from the printing side until 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. Blot excess water from the printing side with unprinted newspaper stock.

Step 9: BLOCKOUT & TOUCHUP

Option 1: Before drying and exposure, use excess emulsion from the coating step to cover the blockout area.

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.

Touchup Option 2: For non-water-based inks, use Screen Filler No. 60 or Extra Heavy Blockout No. 10 thinned with water. Do not re-expose.

Technical Data Sheet



Step 10: RECLAIM THE SCREEN

Remove ink with appropriate solvent. Rinse with water. Degrease with **Screen Degreaser Liquid No. 3** to remove ink and solvent residues. Rinse with a forceful spray. 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 screen. Wash with a forceful spray of water. Use **Haze Remover Paste No. 78**, or **Ghost Remover** with **Ghost Remover Activator** to remove ink and haze residues, if necessary.

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

Light Source		----- 295FAST -----	
Carbon Arc	Coating Method 1	Coating Method 2	Coating Method 3
15 amps	3.5 min	9.5 min	12 min
30 amps	96 sec	5 min	6.5 min
40 amps	72 sec	3.5 min	5 min
60 amps	48 sec	144 sec	3.5 min
110 amps	26 sec	80 sec	108 sec
Metal Halide			
1000 watts	44 sec	124 sec	164 sec
2000 watts	22 sec	62 sec	82 sec
3000 watts	15 sec	41 sec	52 sec
4000 watts	10 sec	31 sec	41 sec
5000 watts	8 sec	24 sec	31 sec
Pulsed Xenon			
2000 watts	115 sec	5.5 min	6.5 min
5000 watts	46 sec	134 sec	3 min
8000 watts	29 sec	84 sec	115 sec
Mercury Vapor			
250 watts	4 min.	10 min	14 min
2000 watts	29 sec	82 sec	105 sec
4000 watts	14 sec	41 sec	52 sec
Fluorescent Tubes*			
FT 40 watts	144 sec	6 min	Not recommended

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

EXPOSURE VARIABLE FACTORS (Factors for Variables Affecting Base Time)

Fabric:		Viscosity Adjustment:	
Steel/metalized polyester	2.0 - 4.0	5% dilution	0.95
Dyed Fabric	1.5 - 2.0	10% dilution	0.9
305T white polyester or nylon	1.0	5% more viscous	1.1
Finer than 330T (130T/cm)	0.7 - 0.9		
Coarser than 250T (100T/cm)	1.1 - 2.0		
Multifilament PET	1.3 - 1.5	High Heat and Humidity:	
Exposure Distance:		Factor	1.3-1.8
20"/50cm 0.25	36"/90cm 0.81		
24"/60cm 0.36	40"/100cm 1.00	Taped-up Positives:	
28"/70cm 0.49	52"/130cm 1.69	Factor	1.2-1.3
32"/80cm 0.64	60"/150cm 2.25		

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