



PULSAR™

THE FASTEST STENCIL PROCESSING SYSTEM

Pulsar is an innovative stencil system offering the industry's easiest, most rapid method of making photographic stencils. Pulsar has wide processing latitude, excellent solvent resistance, and is processed with tap water. Pulsar is ideal for a wide variety of applications, but is not formulated for use with water-based inks. Pulsar is best used at mesh counts of 156/inch (61/cm.) or finer.

INSTRUCTIONS

Step 1: PREPARE THE FABRIC SO THAT IT RETAINS WATER

Used or surface treated fabric need only be degreased using **Screen Degreaser Liquid No. 3** or diluted **Screen Degreaser Concentrate No. 33**. For new fabric that is not surface treated, we recommend either 1). a combined abrading and degreasing using **Ulanogel 23** or 2). Thorough degreasing followed by application of a liquid mordant, such as **Mesh Prep No. 25**.

Step 2: EXPOSE THE STENCIL

The camera film or artwork should be right reading on its emulsion (or printed) side. Place this right-reading side in vacuum contact with the backing sheet (shinier side) of the Pulsar. The right reading side of the film or artwork and the emulsion (duller) side of the Pulsar should be facing *away* from the light source during exposure.

From the Exposure Table below, determine the type of light source you have. The exposure times shown are for an exposure distance of 40 inches (= 1 meter). If you are using another exposure distance, find it on the table of Distance Factors below and multiply its factor by the time shown for your light source at a 40-inch distance on the Exposure Table. That is your *theoretical* exposure time. It should be tested. Make a Step Wedge Test using your theoretical exposure time as the central time, with exposure times that are higher and lower. Determine which time adheres best to the fabric and best reproduces the artwork. It is always a good idea to make an actual print with the test stencil to find the exposure time that produces the best print.

Step 3: WASHOUT THE STENCIL

Place the exposed sheet of Pulsar emulsion (duller) side up on an inclined washout board. Use a gentle spray of tap water over the entire surface of the film until the image areas clear, then wash the emulsion side again to remove all soft, unhardened emulsion on the non-image areas.

Step 4: ADHERE PULSAR TO THE MESH

Place the washed out stencil, emulsion side up, on a hard, raised, flat surface. Lower the screen, wet from the preparation rinse, onto the Pulsar. Place a sheet of newsprint (*unprinted* newspaper stock) on the squeegee side of the screen and, with a roller, apply very firm pressure to blot the film into the fabric. Remove the sheet of wet newsprint, replace it with a dry sheet, and blot again. Repeat this several times, or until the newsprint begins to stick to the stencil. Firm blotting assures good adhesion. (*For those accustomed to gelatin-based indirect films, note that Pulsar is blotted with a single sheet of newsprint rather than a pad; blotting should be done with firm, not gentle, pressure.*)

Step 5: DRY THE SCREEN; REMOVE BACKING SHEET

A fan, or a commercial drying oven no hotter than 100°F (39°C), will speed the drying time. The stencil will assume a grayish cast when it is dry. Remove the polyester backing sheet by pushing up on a corner of the stencil with a fingernail from the squeegee side. The corner of the backing sheet will lift away from the stencil on the printing side. Grasp the corner of the backing sheet and peel it away slowly and carefully at a 180° angle. The backing sheet will release easily when the emulsion is completely dry. If it does not release easily, dry the screen longer.

*Ulanotips: 1). For longer printing runs, post-expose the adhered, dry film for triple the initial exposure time on the squeegee side. 2). To speed stencil production, combine the drying times of Pulsar and the screen filler. The open fabric between the edges of the Pulsar and the frame will dry before the Pulsar emulsion. When the open fabric is dry, apply **Screen Filler No. 60** or **Extra Heavy Blockout No. 10**. Allow the filler and film to dry completely.*



Technical Data Sheet

Step 6: RECLAIM THE SCREEN

Remove ink from the screen with the ink manufacturer's recommended washup solvent as soon after printing as possible. Degrease with **Screen Degreaser Liquid No. 3** to remove ink or solvent residues and speed the action of the stencil remover. Rinse the screen with water. Brush **Stencil Remover Liquid No.4** or **Stencil Remover Paste No.5** on both sides of the screen. Let the screen stand for no more than 5 minutes. Wash with a strong spray of water. Do not allow the stencil remover to dry on the screen, as this can result in a permanent stencil. Use **Haze Remover Paste No. 78** or **Ghost Remover** in combination with **Ghost Remover Activator** to remove ink haze residues.

EXPOSURE TABLE

TYPE OF SOURCE	POWER	EXPOSURE TIMES
Carbon Arc	15 amps	600
Carbon Arc	30 amps	300
Carbon Arc	40 amps	225
Carbon Arc	60 amps	150
Carbon Arc	110 amps	83
Fluorescent	40 watts	375
Mercury Vapor	125 watts	1250
Mercury Vapor	1000 watts	171
Mercury Vapor	2000 watts	85
Mercury Vapor	4000 watts	43
Metal Halide	1000 watts	129
Metal Halide	2000 watts	65
Metal Halide	3000 watts	43
Metal Halide	4000 watts	33
Metal Halide	5000 watts	25
Pulsed Xenon	2000 watts	350
Pulsed Xenon	5000 watts	140
Pulsed Xenon	8000 watts	88

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.	3.24