DIRECT/INDIRECT® PHOTOSTENCIL SYSTEM

The quality of film with the durability of emulsion.

The Direct/Indirect System is a two-part system that combines the print quality of film with the durability of emulsion. Ideal for documented quality systems requiring minimal process variance.

- **Accurate, predictable stencil thickness control for difficult repeat jobs.**
- **Excellent print quality.**
- **Excellent durability for long print runs.**
- **For use with solvent-based, UV and plastisol inks.**

Direct/Indirect films are not pre-sensitized and will not age on the shelf. D-2 Diazo Transfer Emulsion contains a unique, very high sensitizer ratio essential to properly sensitize the film for imaging and maximum durability

SIZE/THICKNESS	MESH COUNT	APPLICATION
D-50 (0.5 mil/13µ)	280 - 420	Fine halftones, detailed line art and UV inks.
D-75 (0.75 mil/19µ)	230 - 330	Fine halftones and UV printing.
A-100 (1.0 mil/25µ)	140 - 280	General purpose printing, medium ink deposit, light blue for easy registration.
B-100 (1.0 mil/25µ)	140 - 280	General purpose printing, halftones plus medium ink deposit.
B-150 (1.5 mil/38µ)	150 & coarser	For opaque and heavy ink laydown; ideal for solder mask.
B-200 (2.0 mil/50µ)	150 & coarser	For heaviest deposit. Used most often for textile, some graphic applications.

CHEMICALS

REQUIRED

Chroma/Wet™ iSC
degreaser

Chroma/Strip™ iSC
screen reclaimer

RECOMMENDED

Chroma/Last iSC
permanent stencil hardener

MATERIALS

REQUIRED

Exposure unit
Clean work area
Washout sink
40-50 durometer soft rounded squeegee

RECOMMENDED

Drying cabinet
Pressure washer
Exposure calculator

SAFETY AND HANDLING

Direct/Indirect films should be handled like any other capillary film. This material is not hazardous when used within reasonable standards of industrial hygiene and safe working practices. Refer to SDS for further information.

STORAGE

Direct/Indirect films should be stored at room temperature and should not be stored at temperatures above 80°F (27°C) or below 32°F (0°C). Direct/Indirect film should be stored in its original container.

Sensitized D-2 Emulsion has a shelf life of 4-6 weeks and should be refrigerated between using.

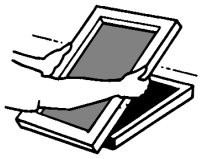
Protect from freezing. D-2 emulsion is not freeze/thaw stable.

DIRECT/INDIRECT PHOTOSTENCIL SYSTEM

INSTRUCTIONS

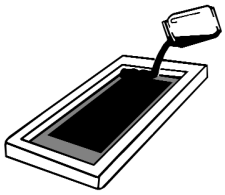
PREPARE

Add water to sensitizer and mix solution into D-2 Transfer Emulsion. Place the film, emulsion side up, on a clean, flat surface which is smaller than the inside dimensions of the screen frame. Place screen, squeegee side up, on film.



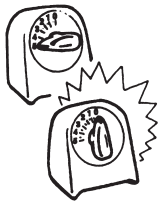
COAT

Pour a bead of transfer emulsion at one end of screen. With light squeegee pressure, coat emulsion across screen with soft, roundedged (40-50 durometer) squeegee. Card off excess emulsion. The coated screen should have a shiny or wet look. If not, reflood and squeegee again.



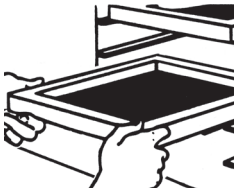
DWELL STEP

After coating with transfer emulsion, allow time for the emulsion to sensitize the film. Chromaline recommends 5 - 15 minutes for this dwell step. Do not use heat or fan. NOTE: The thicker the stencil, the longer the dwell step should take.



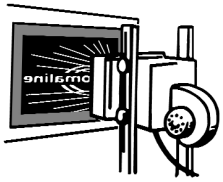
DRY

After dwell step is complete, thoroughly dry the screen in a dark area, then remove the carrier. You will know the film is dry when the carrier peels off easily. If the carrier makes any noise when being pulled off, or resists being pulled off, additional drying time is needed. Do not exceed high temperatures of 110°F (43°C). Screen will be dry in approximately 30 minutes.



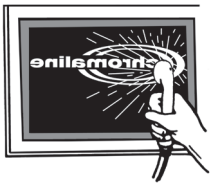
EXPOSE

With polyester carrier peeled off, place the emulsion side of the positive against the print side of the screen in an exposure frame. Run an exposure test to determine your correct exposure. (See guide at right.)



DEVELOP

Gently spray both sides of screen with lukewarm water, wait 30 seconds then gently wash print side of the screen until image is fully open. Rinse both sides thoroughly. Dry screen completely and you are ready to print.



RECLAIM

Apply a high quality screen reclaimer, such as Chroma/Strip iSC to both sides. Scrub area to be reclaimed with a stiff nylon brush to ensure entire surface is wet and let sit until stencil begins to dissolve. Remove stencil residue with pressure washer, then rinse with hose, thoroughly flooding screen and frame.

*Do not let reclaimer dry

EXPOSURE GUIDELINES

Note: Exposure times are suggested only as a guide. Individual exposure times may vary depending upon equipment used, bulb age, and other shop conditions. Suggested exposure times are as follows:

UV EXPOSURE CHART

Starting exposure times for Direct/Indirect Emulsion System using D2 Transfer Emulsion and a 230 yellow polyester monofilament mesh. Chromaline recommends the use of an exposure calculator or step exposure for determining your best exposures with your equipment and conditions.

Film	1KW @ 18"	5KW @ 40"
D-50	3 min. 15 sec.	2 min. 00 sec.
D-75	3 min. 45 sec.	2 min. 30 sec.
A-100	3 min. 45 sec.	2 min. 30 sec.
B-100	4 min. 00 sec.	2 min. 45 sec.
B-150	4 min. 30 sec.	3 min. 15 sec.
B-200	5 min. 15 sec.	4 min. 00 sec.

Film Roll Size	Transfer Emulsion
26" x 50'	One Quart
26" x 200'	One Gallon
52" x 50'	Two Quarts
52" x 200'	Two Gallons

* Exposure times were determined using the Chromaline UV Minder Radiometer/Dosimeter and CHROMALINE EXPOSURE CALCULATOR.

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