

## CDF® Lexar

### PURE PHOTOPOLYMER (SBQ) CAPILLARY FILM SYSTEM FOR USE WITH SOLVENT-BASED INKS

**CDF Lexar** is a series of SBQ (pure photopolymer) capillary films for use with solvent-based inks. **CDF Lexar** is easy to reclaim and well suited to the printing of flat-stock graphics, plastisols for textiles, POP displays, computer-to-screen (CTS), containers, printable adhesives, and advertising specialties. The red film is coated on a matte-surfaced polyester. This imparts a slight texture to the printing surface of the stencil, thus minimizing hydrostatic attraction to the printing stock under conditions of high humidity, and electrostatic attraction under low humidity. **CDF Lexar** is coated at thicknesses of 15, 20, 25, 30, 40, and 50 microns. Mesh count should be compatible with film thickness: for **CDF Lexar-15**, use 165 threads or more per cm. (419 /inch+); for **CDF Lexar-20**, use 120 - 165 /cm. (305-419 /inch); for **CDF Lexar-25**, use 100 - 150 /cm.(255 - 380 /inch); for **CDF Lexar-30**, use 90 - 165 threads per cm. (230 – 419 /inch); for **CDF Lexar-40**, use 77 – 120 /cm. (196-305 /inch); for **CDF Lexar-50**, use 33 – 77 /cm. (86 – 196 /inch).

#### **INSTRUCTIONS**

##### **Step 1: PREPARE THE FABRIC**

Used or surface-treated fabric need only be degreased using **Screen Degreaser Liquid No. 3**, dilute **Screen Degreaser Concentrate No. 33** or **Magic Mesh Prep**. (Mechanical abrasion, an option for new fabric that is not surface treated, 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 thoroughly. Use **Magic Mesh Prep** or **CDF Mesh Prep No. 25** to promote uniform water retention during adhering. (**Magic Mesh Prep** also acts as both a degreaser and an antistatic treatment.)

##### **Step 2: ADHERE CDF LEXAR TO THE SCREEN**

**Standard Method:** Position **CDF Lexar** on a flat surface, emulsion side up. Place the printing side of a wet screen on top of the film. Make a single squeegee stroke across the squeegee side. Wipe off any excess water. **"Roll-Down" Method:** Roll the cut-to-size film, emulsion side out, around a small plastic tube 1" - 1 ½" (ca. 2 ½ - 4 cm.) in diameter. Soak the fabric from the squeegee side. Contact the edge of the roll to the printing side of the fabric at the top end of the screen. Unwind the roll, maintaining firm contact with the fabric. Make one light squeegee stroke across the squeegee side to remove excess water.

##### **Step 3: DRY THE SCREEN**

Dry the screen at room temperature in a dirt- and dust-free area. Use a fan to speed drying. Avoid high humidity. Under humid conditions, dry the screen with warm, filtered air, up to 100°F (38°C) in a commercial dryer. Use a dehumidifier in the drying area, if possible.

##### **Step 4: REMOVE THE BACKING SHEET**

The backing sheet acts as a dirt and dust protector during drying and storage. Remove it immediately before exposing the stencil.

##### **Step 5: CALCULATE THE APPROXIMATE EXPOSURE TIME**

From the Base Exposure Table below, select the type of light source you have and its wattage or amperage, then refer to the thickness of **CDF Lexar** you are using. Multiply your Base Exposure Time by all relevant Exposure Variable Factors (in the table below) to find your Approximate Exposure Time. Base Exposure Time X Exposure Variable Factors = Approximate Exposure Time.

##### **Step 6: DETERMINE THE OPTIMAL EXPOSURE TIME**

Make a Step Wedge Test (there is an instructional video covering this on the Ulano Web site: [www.ulano.com](http://www.ulano.com)) or use the **Ulano ExpoCheck**—carried through to actual printing—to determine your optimum exposure time. Optimum exposure is indicated: ■ At the exposure time when the emulsion first reaches its maximum color density and the edges of the positive do not "resolve." ■ There is no suggestion of softness or sliminess on the stencil. ■ The print best duplicates the test positive *at the level of resolution that the job requires.*

##### **Step 7: WASHOUT**

Wet both sides of the screen with a gentle spray of cold water; then spray forcefully 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). Dry the screen.

##### **Step 8: BLOCK OUT & TOUCH UP**

For blocking out the screen, use **Screen Filler No. 60** or **Extra Heavy Blockout No. 10** on dry fabric. For touchups, use **Screen Filler No. 60** or **Extra Heavy Blockout No. 10** thinned with water.

##### **Step 9: RECLAIM THE SCREEN**

Remove ink with **All-Purpose Ink Wash** or the appropriate solvent. Rinse the screen 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 stand for more than 5 minutes, and never allow the stencil remover to dry on the screen, as this can result in a permanent stencil. Rinse off the stencil remover with a gentle spray of water, then follow with a forceful spray. Use **Walk Away Haze Remover** or **Haze Remover Paste No. 78** to remove any ink haze or residues.

[www.ulano.com](http://www.ulano.com)

**STORAGE:** Unexposed screens can be stored in a dark, dry, cool environment for up to one month. Unused film can be stored in it tubes for up to 18 months. High heat and humidity reduce shelf life.

**BASE EXPOSURE for CDF LEXAR at 100 cm (40 inches) exposure distance using white mesh.**

Light Source	CDF Lexar-15	CDF Lexar-20	CDF Lexar-25	CDF Lexar-30	CDF Lexar-40	CDF Lexar-50
<b>Carbon Arc:</b>						
110 amps	34 sec.	51 sec.	68 sec.	40 sec.	58 sec.	75 sec.
<b>Metal Halide:</b>						
2000 watts	25 sec.	38 sec.	50 sec.	29 sec.	42 sec.	60 sec.
3000 watts	17 sec.	26 sec.	34 sec.	20 sec.	28 sec.	38 sec.
4000 watts	13 sec.	19 sec.	25 sec.	19 sec.	23 sec.	30 sec.
5000 watts	10 sec.	15 sec.	20 sec.	15 sec.	18 sec.	26 sec.
7000 watts	7 sec.	11 sec.	15 sec.	10 sec.	12 sec.	18 sec.
<b>Pulsed Xenon:</b>						
2000 watts	142 sec.	3 ½ min.	4 ¾ min.	200 sec.	4 ½ min.	5 ¾ min.
8000 watts	36 sec.	1 min.	75 sec.	50 sec.	70 sec.	80 sec.
<b>Mercury Vapor</b>						
2000 watts	32 sec.	51 sec.	70 sec.	40 sec.	58 sec.	76 sec.
<b>Fluorescent Tubes*</b>						
40 watts	2 ½ min.	3 ¾ min.	5 min.	3 ½ min.	4 ¾ min.	6 min.

\*Note: Base exposure times are given for 10 cm (4 inches) exposure distance for unfiltered backlight. For “cool white” or “daylight” tubes, use at least double the exposure time.

**EXPOSURE VARIABLES: Factors for variables affecting base time**

Mesh		Exposure Distance:		Exposure Distance:	
Stainless steel mesh	2.0-4.0	20"/50 cm	0.25	48"/120 cm	1.44
Dyed Mesh	1.5-2.0	24"/60 cm	0.36	52"/130 cm	1.69
<b>Imaging</b>		28"/70 cm	0.49	56"/140 cm	1.95
Fine line positive printing	0.80	32"/80 cm	0.64	60"/150 cm	2.25
Fine line reverse printing	1.20	36"/90 cm	0.81	72"/180 cm	3.24
Halftones, to 50 lines/in (20/cm)	0.90	40"/100 cm	1.00	84"/210 cm	4.41
Halftones above 50 lines/in (20/cm)	0.80	44"/110 cm	1.21	100"/250 cm	6.25
<b>Adhering</b>					
Direct/Indirect	1.3-1.5				
<b>Taped-up Positives</b>					
Tape-up or montage positives, per layer	1.10				

**STORAGE:** Store **CDF Lexar** rolls in their tubes, and sheets in their original packaging, to protect the film from accidental exposure and mechanical damage. **CDF Lexar** has a shelf life of 18 months. Storage temperature should range between 19° and 24° C. (65° - 75° F.) with a relative humidity of 40% - 60%. Film-mounted screens can be stored in a completely dark, dry, cool environment for up to one month.

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