

# ILFORD ILFOCLEAR™

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## RA-4 PROFESSIONAL CLEAR FILM FOR DIGITAL AND ANALOG COLOR PRINTING

**FEATURES** ILFOCLEAR is a professional high speed color print film specially designed for optimum performance in all digital enlargement devices. ILFOCLEAR is suitable for use on diffused lightboxes.

ILFOCLEAR features excellent dye stability, suitable for all commercial applications where photographic output is a must. The high color saturation, deep blacks and brilliant whites provide for excellent color and tone reproduction and optimum gradation from the brightest highlights to the deepest shadows, meeting all commercial requirements. ILFOCLEAR is not subject to bleeding and delivers razor-sharp images, text and graphs.

**PRODUCT RANGE** ILFOCLEAR is available in standard roll and sheet sizes.

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ICD2.F7	Clear film
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**SAFELIGHT** ILFOCLEAR should be handled in total darkness, which includes avoiding miscellaneous sources such as stray light from enlarging heads and LEDs. ILFOCLEAR is very sensitive to light.

**STORAGE OF UNEXPOSED MATERIAL** ILFOCLEAR should be stored in a cool, dry place, below +10°C (+50°F) and 65% RH (e.g. in a refrigerator) as high temperatures and humidity can damage color films. To avoid surface condensation the unexposed film must be left to reach room temperature before being used, but should not be heated to accelerate this process. The ideal method is to leave the unopened packs to adapt to room temperature overnight.

**SENSITOMETRY** ILFOCLEAR features improved sensitometric characteristics, namely:

- Improved latent image stability (24 hours)
  - Excellent Dmin and Dmax
  - Designed for very short exposure times
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**DIGITAL EXPOSURE**

ILFOCLEAR can be exposed with all existing large format digital enlargers, like the Durst Lambda, the OCE 430/500XL Series and the Chromira Series.

The exposure compensation factors are available from ILFORD Technical Support.

**ANALOG OPTICAL EXPOSURE**

ILFOCLEAR can be exposed with all analog enlargers and printers. ILFOCLEAR is designed for the short exposure times used with digital printing units. It is suitable for some analog applications, but will not print at the same speed or color balance as papers designed for optical exposure.

**HANDLING OF EXPOSED MATERIAL**

The time between exposure and development should be constant for purposes of maximum uniformity. Avoid holding exposed material over for processing the next day. If it cannot be processed after exposure, it should be stored in a cool dry place and processed at the first opportunity.

**PROCESSING**

The film can be processed in any processor using RA-4 or compatible chemistry, providing the development stage of the processor can be set to 110 seconds duration. The standard RA-4 process control strips and monitoring manual are also valid. Replenishment rates can vary depending on the manufacturer of the chemicals used; the supplier's recommendations should be followed as a general guideline.

	Time	Temperature	Replenishment Rates *
DEVELOPER	1'50"	35±0.3°C (95±0.5°F)	495 ml/m <sup>2</sup>
BLEACH - FIX	1'50"	30–36°C (86–97°F)	495 ml/m <sup>2</sup>
WASH **	3'40"	30–40°C (86–104°F)	6'000–11'000 ml/m <sup>2</sup>
DRY	As needed	max. 90°C (194°F)	

\* Starting values valid for RT type chemistry (for Roller Transport processors)

\*\* Two tank cascade

Wash water flow rates vary depending on the number of wash tanks and the volume of paper processed; using a two tank countercurrent wash cascade, 6'000ml/m<sup>2</sup> are necessary. The amount of water must be increased to 11'000ml/m<sup>2</sup> when using two single tanks.

**LIGHTBOXES**

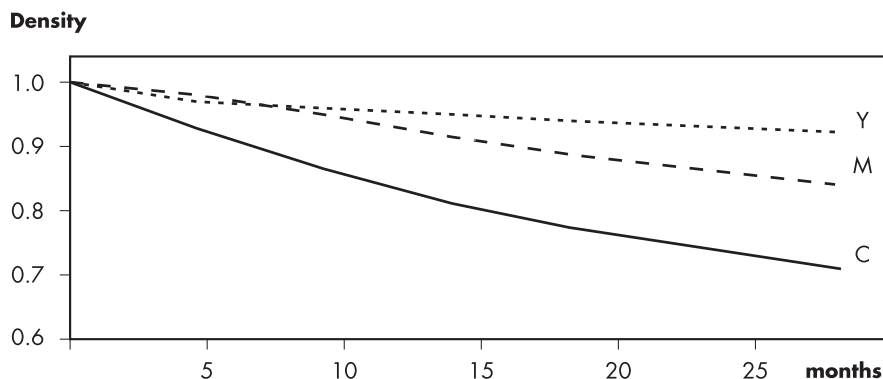
For best results ILFOCLEAR Display Transparencies must be evaluated under the same light conditions that will be used to display the final images. The lightbox (according to ISO 3664 and ANSI standard PH2.30-1989) should be equipped with a light source with a color temperature of 5000K and a Color Rendering Index (CRI) of 85 to 100. We recommend a CRI greater than 90. Fluorescent lamps such as the cool white deluxe, which are available from several manufacturers, meet these specifications. Average illumination at the film plane should normally be between 5,000 and 10,000 Lux. In order to avoid excessive heat build up it is important that the lightbox be well ventilated. Temperatures higher than 38°C (100°F) can lead to an increased tendency for change in color balance of the display over time. Higher intensity illumination than that indicated will also decrease the life of a transparency proportionally.

**LIGHT STABILITY**

The graph on this page is based on data from independent tests performed at the Image Permanence Institute at Rochester Institute of Technology.

**FADING • UNPROTECTED MEDIA**

**Fading criteria**  
 For illustrative purposes, unacceptable fading is defined by ILFORD according to American National Standards recommendations as an equal density loss of all three colors (yellow, magenta, cyan) of 30% measured from an original density of 1.0. However, the deviation will vary depending on scene content, and the conditions under which the printed image is viewed. This definition should be taken into account when comparing similar products from other manufacturers.



**Average light exposure**  
 5000 Lux, 12 hours/day  
**Test conditions**  
 25–35°C (77–95°F), 40–60% RH

**NOTES**

The curves and data given in this publication represent products tested under definite conditions. They do not represent standards or specifications. They can vary when using different processes or conditions. ILFORD reserves the right to modify product characteristics at any time.

ILFOCLEAR is a trademark of ILFORD Imaging.