KODAK PROFESSIONAL PRO IMAGE II Paper

Kodak

TECHNICAL DATA / **COLOR PAPER**

June 2008 • E-4002

KODAK PROFESSIONAL PRO IMAGE II Paper is a copyright-protected, value-driven silver halide paper. This entry-level professional paper is designed for use in moderate-volume labs where a significant quantity of the images printed are digital. This paper can be exposed both digitally and optically. The paper has rich color reproduction, a pleasing tone scale and produces natural looking flesh reproduction. In addition, the paper performs well under varying conditions in processing.

This paper is available in a variety of roll sizes in E and F surfaces. It is designed for processing in KODAK EKTACOLOR RA, KODAK EKTACOLOR PRIME, and KODAK EKTACOLOR PRIME LORR Chemicals for Process RA-4 or KODAK EKTACOLOR SM Chemicals for Process RA-2SM. This paper features:

FEATURES	BENEFITS
• Excellent high-intensity reciprocity characteristics	• One paper for all exposing devices, from digital (CRT, LED, MLVA, and laser) exposing devices to optical enlargers and automatic printers • Crisp text in digital printing devices
• Robust process performance	• Excellent consistency when processed in a variety of process conditions and chemistries
• New gold backprint promotes image copyright protection	• Differentiates and protects work via copyright protection message • Reinforces the difference between professional and consumer images
• The latest KODAK Paper emulsion technology	• Saturated, rich color reproduction • Dark blacks • Consistently good pictures for the range of skin tones
• State-of-the-art image stability	• Prints that last a lifetime

STORAGE AND HANDLING

For optimum results, store unexposed paper at 25°C (78°F) or lower in the original package. High temperatures or high humidity may produce unwanted changes.

To avoid moisture condensation on unexposed paper that has been refrigerated, allow the paper to warm up to room temperature before opening the package. For best results, remove the paper from cold storage the day before you use it, or allow the paper to warm up for the appropriate time from the following table:

Minimum Warm-Up Time (Hours) at Ambient Temperature of 21°C (70°F)			
Size	From a Storage Temperature of		
	-18°C (0°F)	2°C (35°F)	13°C (55°F)
Rolls: cm x m (in. x ft)			
10.2 x 90 (4 x 295) 10.2 x 180 (4 x 590)	5 8	4 6	2.5 4.4
12.7 x 90 (5 x 295) 12.7 x 180 (5 x 590)	5.5 9	4 7	2.5 5
15.2 x 90 (6 x 295) 15.2 x 180 (6 x 590)	5.5 9.5	4.5 7.5	3 5
20.3 x 90 (8 x 295) 20.3 x 180 (8 x 590)	11	8	5.5
25.4 x 90 (10 x 295)	6	4.5	3
27.9 x 90 (11 x 295) 30.5 x 90 (12 x 295) 50.8 x 90 (20 x 295)	6	4.5	3

Handle the paper carefully by the edges to avoid creases and fingerprints. The paper is packaged with the emulsion side of all sheets facing in the same direction. For complete light and moisture protection, use the inner bag *and* the two-part cardboard box to store the paper.

DARKROOM RECOMMENDATIONS

Do not use a safelight. Handle unprocessed paper only in *total darkness*. KODAK PROFESSIONAL PRO IMAGE II Paper is sufficiently sensitive to photographic safelights that sensitometric shifts may occur before D-min (fog) changes are seen.

If a safelight is absolutely necessary for a specific application, the effect of the safelight can be minimized by using a KODAK 13 Safelight Filter / amber with a 7 1/2-watt bulb no closer than 4 feet (1.2 metres) from the paper. Keep safelight exposure as short as possible. Test the safelight exposure to verify that safelight exposure intensities and/or times are not adversely affecting print quality. See KODAK Publication No. K- 4, *How Safe is Your Safelight?* for information on safelight testing.

Because KODAK PROFESSIONAL PRO IMAGE II Paper is very light sensitive, printing and processing darkrooms should be lighttight. In addition, ensure that sources of stray light within the darkroom, such as lamphouse heads, timer lights, LEDs, etc., are eliminated or shielded.

EXPOSURE

KODAK PROFESSIONAL PRO IMAGE II Paper is optimized for both digital and optical printers. Significant testing has been done across a broad range of Kodak and OM digital printers to validate satisfactory digital performance of KODAK PROFESSIONAL PRO IMAGE II Paper.

Optical Printing

See printing manuals for KODAK Printers, KODAK Minilab Systems or other manufacturer's printers / minilabs.

Keep negatives and the optical system of the printing equipment clean. Mask the negative to eliminate stray light.

Printers equipped with a tungsten lamp are suitable. Do not use fluorescent lamps. Use a heat-absorbing glass or some other infrared rejectiono device to control temperatures at the negative and to avoid excessive cyan filtration. Because voltage changes affect the light output and color quality, a voltage regulatore should be used.

To control the color balance, use dichroic filters, KODAK Color Printing Filters (CP), or KODAK Color Compensating Filters (CC) placed between the lamp and the negative. You can also use CC filters between the lens and the paper if they are clean and unscratched. Use as few CC filters between the lens and the paper as possible—preferably not more than three. If you use cyan filtration, use filters with the suffix "-2," such as CP10C-2.

Start with a filter pack of 40M + 55Y for the white-light method. Adjust filtration as necessary.

Printer Control Negative Sets

Use the appropriate KODAK Printer Control Negative Set to determine aims for KODAK Color Negative Films or to cross over from another type of color paper to KODAK PROFESSIONAL PRO IMAGE II Paper.

Digital Printing

You can expose KODAK PROFESSIONAL PRO IMAGE II Paper with many types of digital printers. KODAK Printers include:

- KODAK PROFESSIONAL RR 30, RP 30 and SRP 30 Laser Printers
- KODAK PROFESSIONAL RP 50 LED Printer
- KODAK PROFESSIONAL LED II Printer 20R
- KODAK LED Digital Color Printers 20R and 20P
- KODAK CRT-based Printers such as KODAK PROFESSIONAL Digital Multiprinters

Calibration Aims for for KODAK Printers

To achieve optimal quality prints on KODAK PROFESSIONAL PRO IMAGE II Paper with Kodak digital output devices, you must install new calibration files.

The latest calibration files are available at www.kodak.com/go/hostswdownloads. If your printer does not have the newest calibration files, download and install them at this time.

Other Equipment Manufacturer's Printer Calibration for KODAK PROFESSIONAL PRO IMAGE II Paper

The starting-point recommendations listed in the following table have yielded good image quality in prints on KODAK PROFESSIONAL PRO IMAGE II Paper produced by other equipment manufacturers' digital output devices.

Printer	Calibration
Durst Lambda: 130 and 130 Plus 131 and 131 Plus Pi 50 76 Plus	Starting D-max: 2.00R, 2.00G, 1.80B Basic calibration settings: C=0.00, M=83.80, Y=116.50, D=101.10
Durst Theta 50 and 51	Starting D-max: 1.95R, 2.05G, 1.80B Basic calibration settings: C=0.00, M=80.00, Y=162.00, D=126.00
Durst Theta 76	Starting D-max: 2.00R, 2.00G, 1.80B Basic calibration settings: C=0.00, M=0.025, Y=0.257, D=1.244
Fuji Frontier	We recommend that you use KODAK PROFESSIONAL PRO IMAGE II Paper to calibrate the printer channel that you plan to use. If you don't have a recommended channel that you normally use, please start testing with Channel I. 1. Load PRO IMAGE II Paper into the paper magazine that you will use to print. 2. From the **Setup and Maintenance** menu, select **Print Condition Setup and Check**. Then select **Paper Condition Setup** to perform a standard calibration.
Noritsu QSS-2711 and Noritsu MP1600	Setting up a Channel for KODAK PROFESSIONAL PRO IMAGE II Paper 1. Set up a paper channel with PRO IMAGE II, using the normal Setup procedure. This setup includes MLVA Setup, Uniformity, and Gamma tests. 2. If any color changes are needed, enter them using the Magazine Balance function on the NORITSU MP1600 printer.
Polielettronica LASERLAB	Follow the manufacturer's standard paper calibration procedure for a new paper.

LATENT-IMAGE KEEPING

For best results, process the paper on the same day that you expose it. If latent-image shifts occur, minimize them by keeping the time between exposure and processing as consistent as possible.

PROCESSING

Use KODAK EKTACOLOR Chemicals for Process RA 4 or KODAK EKTACOLOR SM Chemicals for Process RA-2SM. For FUJI FRONTIER Processors, use KODAK EKTACOLOR Processing Cartridge 111 and KODAK Rinse Tablets. Use KODAK Control Strips, Process RA-4 to monitor your process.

For more information on processing chemicals, see www.kodak.com/go/photochemicals.

Use a maximum drying temperature of 93°C (200°F).

VIEWING

Evaluate prints under light of the same color and brightness that you will use to view the final prints. For an average condition, use a light source with a color temperature of 5000 ± 1000 K, a Color Rendering Index (CRI) of 85 to 100 (an index of 90 or higher is desirable), and an illuminance up to 500 lux. Fluorescent lamps such as a cool white deluxe lamp (made by several manufacturers) meet these conditions You can also use a mixture of fluorescent and incandescent lamps. For each pair of 40-watt cool white deluxe lamps, use a 75-watt frosted tungsten bulb.

RETOUCHING

Retouch this paper by following instructions in KODAK Publication No. E-70, *Retouching Prints on KODAK EKTACOLOR and EKTACHROME Papers*.

PRINT FINISHING

Mounting/Laminating

Prints can be mounted using a contact type adhesive or cement for cold mounting. In addition, prints can be mounted or laminated using pressure sensitive materials with a roller mounting or laminating system.

If the prints are to be displayed behind glass, maintain a slight separation between the print and the glass.

Mounting or laminating prints at high temperatures is not recommended.

Lacquering

For more information on lacquering and other post-process treatments, see KODAK Publication No. E-176, *Post-Process Treatment of Color Prints—Effects on Image Stability*.

STORAGE AND DISPLAY OF PRINTS

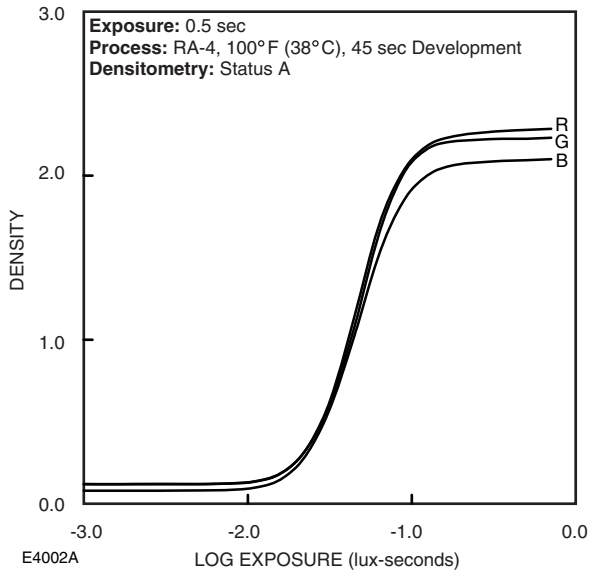
KODAK PROFESSIONAL PRO IMAGE II Paper has been formulated to provide improved dye stability and print longevity for prints displayed under typical home lighting conditions (i.e., 120 lux for 12 hours a day) and typical home dark storage conditions (i.e., 20 to 23°C [68 to 73.4°F] and 50% relative humidity).

Despite the improvements in print longevity and fade neutrality, photographic dyes, like all dyes, can change with time and exposure to sunlight, ultraviolet radiation, excessive heat, and high humidity. To help prevent changes in photographic dyes, follow these guidelines:

- Display prints in the lowest light level consistent with your viewing needs. Tungsten light is the preferred artificial light source.
- If a print is exposed to direct or indirect sunlight or fluorescent light, use an ultraviolet-absorbing filter (such as glass) between the light source and the print.
- Keep the temperature and humidity as low as possible.
- Use album materials described in KODAK Publication No. E-30, *Storage and Care of KODAK Photographic Materials—Before and After Processing.*

CURVES

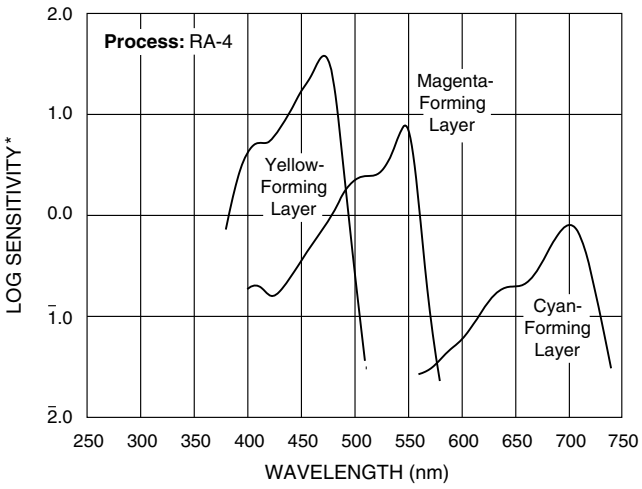
Characteristic Curves



NOTICE: The sensitometric curves and data in this publication represent product tested under the conditions of exposure and processing specified. They are representative of production coatings, and therefore do not apply directly to a particular box or roll of photographic material. They do not represent standards or specifications that must be met by Eastman Kodak Company. The company reserves the right to change and improve product characteristics at any time.

KODAK PROFESSIONAL PRO IMAGE II Paper

Spectral Sensitivity Curves



*Sensitivity = reciprocal of exposure (ergs/cm^2) required to produce specified density

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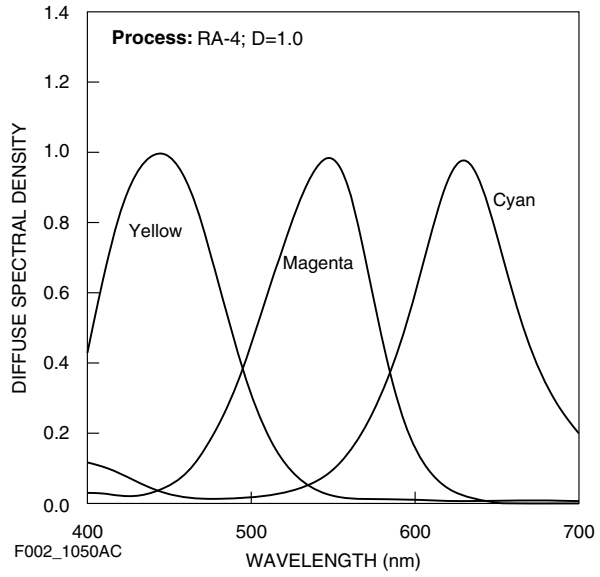
Spectral-Dye-Density Curves



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MORE INFORMATION

Kodak has many publications to assist you with information on Kodak products, equipment, and materials.

The following publications are available from dealers who sell Kodak products, or you can contact Kodak in your country for more information.

E-30	*Storage and Care of KODAK Photographic Materials—Before and After Processing*
J-36	*Choosing the Right Chemicals for Your Minilab*

New 6-08
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