

# KODAK PROFESSIONAL ULTRA ENDURA PAPER



- Extended color gamut for very rich colors and attractive flesh tones
- High contrast, producing intense blacks for commercial applications requiring high impact
- Offered without the base-side watermark
- State-of-the-art image stability (100 years in home display; 200 years in dark storage; 1 to 5 years for commercial display\*)
- Digital and optical printing capability to improve lab efficiency
- Robust processing performance to improve lab consistency

# Efficient lab production. Vibrant print quality.

Would you like to offer your customers prints with extraordinary color gamut and simplify your workflow at the same time? That's exactly what you can do with KODAK PROFESSIONAL ULTRA ENDURA Paper. Deliver amazing output quality that lasts.

ULTRA ENDURA Paper is a high-contrast, photographic paper that's optimized for commercial applications. It features an emulsion set that delivers brighter highlights and bold colors for maximum impact. It features higher contrast and color saturation than KODAK PROFESSIONAL SUPRA ENDURA and SUPRA ENDURA VC Digital Papers. And add to that a print life that more than meets the demands for commercial printing.

As a member of the family of ENDURA Media, ULTRA ENDURA Paper shares a similar emulsion set that features pleasing fleshtone reproduction, great highlight and shadow detail, all while delivering excellent print longevity.

With optical/digital printing compatibility, ULTRA ENDURA Paper offers consistent results and easier print matching regardless of printing technology—all from a single inventory of photographic media. What's more, ULTRA ENDURA Paper drives efficiency in lab workflow, improving productivity.

Plus KODAK PROFESSIONAL ENDURA Paper Imaging Emulsion Technology is Kodak's standard for photographic image output—it consistently delivers the results your clients expect while helping you meet your business goals.

For color-charged images that stand out from the crowd, choose KODAK PROFESSIONAL ULTRA ENDURA Paper.

\*Based on product application including specific light levels and temperature conditions; testing conducted as specified in ANSI Publication IT9.9-1996 and ISO Publication 10977, Stability of Colour Photographic Images—Methods for Measuring, including use of illustrative endpoint criteria of 30% dye fade.



# KODAK PROFESSIONAL ULTRA ENDURA PAPER

## Drive and grow commercial sales with outstanding color

The impressive color accuracy of ULTRA ENDURA Paper enables you to faithfully reproduce the hues and tones of the original subject or scene. The result: high color saturation prints that match the original subject matter.

## Attract customers with unrivaled image stability

Customers want prints with a long life. ULTRA ENDURA Paper sets the standard for print longevity. Its tested light keeping is 1 to 5 years for commercial display, equivalent to 100+ years before noticeable fading occurs in typical home display, and over 200 years in dark storage.

# Simplify your operation with papers optimized for both digital and optical printers

A "single-paper" workflow that gives outstanding performance in both digital and optical printing equipment can greatly increase your lab's efficiency. Your ordering and inventory procedures will be much simpler when you don't have to stock separate papers.

## Reduce remakes with greater print consistency

You and your customers will enjoy the benefits of Kodak's state-of-the-art color technology in prints made on this paper. You'll see better matched prints between digital and optical printers, bright/rich color saturation, pleasing tone scale, and excellent skin-tone reproduction, as well as brighter blues and cyans, purples, and reds. And from studio portraits to outdoor candids, your customers get the matched prints they want.

## Improve lab workflow and productivity

Excellent process robustness gives you the consistency you need with great first time yield rates. Low replenishment rates translate to savings in processor maintenance and effluent volumes.

ULTRA ENDURA Paper performs superbly under varying exposure and processing conditions, and is easily able to provide great results with Kodak's and other manufacturers' films—either optically or from scanned images.

FEATURE WORKFLOW PRODUCTIVITY	ADVANTAGE	BENEFIT
Robust and economical processing performance	<ul> <li>Remarkable productivity and consistency</li> <li>Minimal sensitivity to process variations, process contamination, and changes in product mix or processor utilization</li> <li>Low effluent produced</li> <li>Low frequency mixing/replacement of replenisher containers</li> </ul>	<ul> <li>Consistency in prints; easy to calibrate</li> <li>Clean process; low process maintenance</li> <li>Low operating cost</li> <li>Low replenishment rates</li> <li>Low environmental impact</li> </ul>
Unique high-intensity reciprocity characteristics  IMAGE PERFORMANCE	• Exceptional exposure range of 32 stops—from 50 nanoseconds to 10 minutes	<ul> <li>One paper for all exposing devices, from digital (CRT, LED, and laser) exposing devices to optical enlargers and automatic printers</li> <li>Optimized text and fringing characteristics in all digital devices</li> <li>One paper that offers flexibility in the lab and simplifies lab inventory control (ordering, stocking, and handling)</li> </ul>
• State-of-the-art image stability*	<ul> <li>Over 100 years in typical home display</li> <li>Over 200 years in dark storage</li> <li>1-5 years for commercial display</li> </ul>	<ul> <li>Exceptional performance in typical home display, and unsurpassed performance in typical home dark storage conditions</li> <li>20 months or more for high-intensity commercial reflection display under 5000 lux</li> </ul>
Advanced color coupler technology	<ul> <li>Saturated and accurate color reproduction</li> <li>Wide color gamut</li> <li>Improved whites</li> <li>Pleasing tone scale</li> </ul>	<ul> <li>Very rich, bright colors</li> <li>Vibrant greens, blues, magentas and reds</li> <li>Natural-looking whites</li> <li>Tone scale is neutral from highlights through to shadows</li> </ul>

\*Based on product application including specific light levels and temperature conditions; testing conducted as specified in ANSI Publication IT9.9-1996 and ISO Publication 10977, "Stability of Colour Photographic Images—Methods for Measuring," including use of illustrative endpoint criteria of 30% dye fade.

In independent, long-term testing of ENDURA Media against the previous generation of KODAK PROFESSIONAL Media, ENDURA Media was found to exhibit significantly improved image stability in terms of color balance and dye fade. These independent results confirmed the internal Kodak testing and, in fact, revealed that Kodak's published estimates concerning image longevity were conservative.†

 $<sup>^\</sup>dagger$  The Image Permanence Institute at the Rochester Institute of Technology.





## Storage and Handling

For optimum results, store unexposed paper at 13°C (55°F) or lower in the original package. High temperatures or high humidity may produce unwanted changes.

#### **Darkroom Recommendations**

Handle unprocessed paper in total darkness. Be sure that your darkroom is lighttight. In addition, ensure that sources of stray light within the darkroom, such as lamphouse heads, timer lights, LEDs, etc., are eliminated or shielded.

#### Printing

KODAK PROFESSIONAL ULTRA ENDURA Paper is optimized for both digital and optical printers.

#### Digital Printing

You can expose ULTRA ENDURA Paper with many types of digital printers.

Kodak printers include:

- KODAK PROFESSIONAL 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

For starting values for Kodak digital printers and other manufacturers' equipment, refer to KODAK Publication CIS-242, *Digital Printer Aims for KODAK PROFESSIONAL ULTRA ENDURA Paper* (available from www.kodak.com/go/endura or contact your Kodak representative).

#### **Optical Printing**

Expose KODAK PROFESSIONAL ULTRA ENDURA Paper in automatic printers or enlargers equipped with tungsten or tungsten-halogen light sources or photo enlarger lamps. Set up and balance the printer or enlarger according to the manufacturer's instructions.

### **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 this paper.

## Processing

Use KODAK EKTACOLOR RA Chemicals for Process RA-4. You can also use KODAK EKTACOLOR Digital Developer Replenisher RT. KODAK PROFESSIONAL Pro Strips, Process RA-4, can be used to monitor your process. Use a maximum drying temperature of 93°C (200°F).

## Latent-Image Keeping

For best results, process 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.

## Retouching

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

## Mounting

Mount the prints with dry mounting tissue or a photographic mounting adhesive. If tissue is used, the temperature across the heating platen should be 82 to 93°C (180 to 200°F). Apply pressure for 30 seconds, or up to 3 minutes for a thick mount.

Caution: Temperatures above 93°C (200°F) and/or high pressures and/or extended time periods may cause physical and color changes in prints.

## Storage and Display of Prints

KODAK PROFESSIONAL ULTRA ENDURA Paper has been formulated to provide excellent dye stability and print longevity for prints displayed under more intense lighting in commercial settings (5000 lux for 20 months), under typical home lighting conditions (i.e., 120 lux for 12 hours a day), and typical home dark storage conditions (i.e., 20 to  $23^{\circ}\text{C}$  [68 to  $73.4^{\circ}\text{F}$ ] and 50% relative humidity). Photographic dyes, like all dyes, can change with time and exposure to sunlight, ultraviolet radiation, excessive heat, and high humidity.

For more information on the complete family of output media, visit **www.kodak.com/go/prolab**. You'll find information about:

PROFESSIONAL MEDIA	FEATURES
SUPRA ENDURA VC Digital Paper	Digital paper for all forms of professional portrait applications with expanded color gamut and excellent flesh-tone reproduction
<b>SUPRA ENDURA</b> Paper	Exceptional flesh tones and pleasing saturated colors
ENDURA Metallic Paper	Unique metallic/high gloss appearance with dynamic tonal impact
<b>ENDURA</b> Transparency Display Material	Translucent-base film for use on illuminators without built-in diffusers
<b>ENDURA</b> Clear Display Material	Clear-base film for use on illuminators with built-in diffusers

\*Available in certain countries only — please contact your normal distributor of KODAK PROFESSIONAL Products.

## **MORE INFORMATION**

For complete technical information, look for KODAK Publication E-4020, KODAK PROFESSIONAL ULTRA ENDURA Paper, on www.kodak.com/go/endura

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