

KODAK PROFESSIONAL Digital Display Materials



KODAK PROFESSIONAL DURATRANS® Plus Digital Display Material
KODAK PROFESSIONAL DURACLEAR™ Plus Digital Display Material

—NOTICE OF DISCONTINUANCE—

KODAK PROFESSIONAL ENDURA Transparency Digital Display Material replaces KODAK PROFESSIONAL DURATRANS Plus Digital Display Material.

KODAK PROFESSIONAL ENDURA Clear Digital Display Material replaces KODAK PROFESSIONAL DURACLEAR Plus Digital Display Material.

KODAK PROFESSIONAL DURATRANS Plus Digital Display Material and PROFESSIONAL DURACLEAR Plus Digital Display Material are silver-halide color materials specifically designed for use in film and paper recorders. Both have sensitivity optimized for use with these digital devices. Output your scanned photographic images directly onto these materials—no need to expose onto film, process the film, and then enlarge the image to make the final transparencies.

KODAK PROFESSIONAL DURATRANS and DURACLEAR Plus Digital Display Materials were designed to increase lab productivity. In addition to brighter, more dynamic images, the Plus Digital Display Materials offer easier calibration, greater robustness, and reduced waste levels.

FEATURES	BENEFITS
• Sensitivity optimized for use with digital devices	• Excellent reproduction of fine detail (text/graphics) • Bright colors
• Low D-min	• Clean, white whites
• High D-max	• Deep, rich blacks
• 7-mil ESTAR Thick Base	• Exceptional strength and dimensional stability

These materials offer excellent color reproduction and durability for a variety of environments. They are designed for processing in KODAK EKTACOLOR Chemicals for Process RA-4.

KODAK PROFESSIONAL DURATRANS Plus Digital Display Material

This is a *translucent-base* color transparency material designed for producing large transparencies for backlit displays on illuminators without built-in diffusers. The white-pigmented coating provides its own diffusion for great versatility. The 7-mil ESTAR Thick Base provides resistance to tearing, which makes it especially suited for large displays. It features the superb whites you have been looking for, deep D-max, a broad gamut of dynamic colors, and excellent reproduction of fine detail.

KODAK PROFESSIONAL DURACLEAR Plus Digital Display Material

This is a *clear-base* color transparency material designed for use on illuminators that have built-in diffusers. A 7-mil ESTAR Thick Base adds strength and dimensional stability.

This material features bright colors, clean whites, and excellent reproduction of fine detail.

SIZES AVAILABLE

These materials are available in a variety of roll sizes.

Sizes and catalog (CAT) numbers may differ from country to country. See your dealer who supplies KODAK PROFESSIONAL Products.

KODAK PROFESSIONAL DURATRANS Plus Digital Display Material

Size in. x ft / cm x m	CAT No.	Spec
20 x 100 50.8 x 30.5	157 8418	901*
30 x 100 76.2 x 30.5	194 6805	
30 x 100 76.2 x 30.5	863 9858	902†
40 x 100 101.6 x 30.5	113 8734	901*
42 x 100 106.7 x 30.5	118 5602	
50 x 100 127 x 30.5	805 4223	

* Spec 901: unperforated, emulsion in, no leader or trailer, no edge markings.

† Spec 902: unperforated, emulsion out, no leader or trailer, no edge markings.

KODAK PROFESSIONAL DURACLEAR Plus Digital Display Material

Size in. x ft / cm x m	CAT No.	Spec
20 x 100 50.8 x 30.5	116 9051	901*
30 x 100 76.2 x 30.5	112 9212	
40 x 100 101.6 x 30.5	117 4093	
42 x 100 106.7 x 30.5	116 6669	
44 x 100 111.8 x 30.5	170 1465	
50 x 100 127 x 30.5	184 1360	

* Spec 901: unperforated, emulsion in, no leader or trailer, no edge markings.

STORAGE AND HANDLING

Store unexposed materials at 13°C (55°F) or lower in the original sealed package. High temperatures or high humidity may produce unwanted quality changes.

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

Warm-Up Times (Hours) to Reach Room Temperature of 21°C (70°F)			
Size	From a Storage Temperature of		
	-18°C (0°F)	2°C (35°F)	13°C (55°F)
20-inch x 100-foot roll	8	7	4
30-inch x 100-foot roll	10	8	5
40-inch x 100-foot roll	11	9	6
50-inch x 100-foot roll	12	10	7

DARKROOM RECOMMENDATIONS

Handle these materials in total darkness. Be sure that your printing and processing darkrooms are lighttight. Carefully control stray light within your printing equipment.

Note: Using a safelight *will* affect your results. These materials are much faster than traditional materials. They are very sensitive to safelights; sensitometric shifts can occur before you observe any changes in D-min.

EXPOSURE

Exposing Equipment

Expose these materials in various types of digital enlargers and printers, such as (but not limited to)—

- Durst Lambda 130 and Durst Epsilon Digital Laser Imagers
- Cymbolic Sciences International LightJet Series or Digital Recorders
- Gretag Imaging Sphera Digital Printers

Because there are numerous manufacturers and models of digital writers, we cannot provide starting-point exposure calibration aims for all equipment. We recommend that you test the materials and calibrate your printer to achieve optimum results.

Note: These digital display materials *are not* designed for optical printing. They *may* be suitable for some optical applications; however, they will not print at the same speed or color balance as materials designed for optical printing.

Equipment Calibration

For optimum results, follow your equipment manufacturer's recommendations for calibrating your printing equipment.

For Durst Lambda Digital Laser Imagers, basic calibration starting values follow. The values are based on readings from an X-Rite DTP-36 Densitometer.

Calibration for KODAK PROFESSIONAL Digital Display Materials on a Durst Lambda 130 Laser Imager

KODAK PROFESSIONAL Material	Process	D-max	Basic Calibration (starting values)
DURATRANS Plus Digital Display (translucent film)	RA-4 (110-second development time)	R = 300 G = 300 B = 300	Y = 66.03 M = 46.55 C = 0.00 D = 105.15
DURACLEAR Plus Digital Display (transparent film)	RA-4 (110-second development time)	R = 247 G = 250 B = 240	Y = 89.05 M = 62.21 C = 0.00 D = 71.20

Calibration for KODAK PROFESSIONAL Digital Display Materials on a Durst Epsilon Laser Imager

KODAK PROFESSIONAL Material	Process	D-max	Basic Calibration (starting values)
DURATRANS Plus Digital Display (translucent film)	RA-4 (110-second development time)	R = 2.80 G = 2.75 B = 2.70	Y = 0.000 M = 0.317 C = 0.148 D = 0.937
DURACLEAR Plus Digital Display (transparent film)	RA-4 (110-second development time)	R = 2.40 G = 2.40 B = 2.30	Y = 0.094 M = 0.377 C = 0.00 D = 0.655

IMPORTANT:

1. Using higher D-max values than those listed above may result in:
 - overexposure
 - small text closing up; unsharp text
 - oversaturated colors in step 21 (e.g., red becomes orange, etc.)
 - insufficient laser power for exposure to start
2. When using the above starting values for the basic calibration, load the paper as "New Paper Type," and do not copy an already calibrated channel.
3. Your Process RA-4 must be to aim and reach a density of 2.10 in each color on D-max of your process control strip; otherwise you may have problems reaching D-max. Also, you may experience a yellow halo around black text and you will not get a pure white.
4. To obtain neutral gray, use a lower D-max for Blue than for Red and Green.
(Example: R = 230, G = 215, B = 200)

For the Cymbolic Sciences International Printers, basic calibration starting values follow. The values are based on readings from an X-Rite DTP-36 Densitometer.

Calibration for KODAK PROFESSIONAL Digital Print and Display Materials on a Cymbolic Sciences International Printer

The targets for the LightJet 5000 can be found at www.cymbolic.com

Select **Service/Support**

Select **FTP site**

Select **Logon as Anonymous user**

Select **Downloads**

Select **Photo**

Select **Qualified Material**

Select **LightJet Fusion**

Select **Intel**

To download an executable that when run will install the files in the correct place on the LightJet 5000 system, scroll down and select the aims you need.

KODAK PROFESSIONAL Digital Display Materials

LATENT-IMAGE KEEPING

For best results, process material on the same day you expose it. (If latent-image shifts occur, minimize them by keeping the time between exposure and processing the same for all materials.)

PROCESSING

Use KODAK EKTACOLOR Chemicals for Process RA-4 to process these materials in continuous or roller-transport processors. Use the same machine settings that you currently use for traditional print and display materials. For more information, see KODAK Publication No. Z-130, *Using KODAK EKTACOLOR Chemicals*.

Use a drying temperature below 96°C (205°F).

VIEWING

Evaluate images on light boxes or under light of the same color and brightness that you will use to display the final image. A good average viewing condition is a light source with a color temperature of 5000 ± 1000 K 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 (made by several manufacturers) meet these conditions. You can also use warmer lamps such as the Phillips 5000 K Ultralume, or a mixture of incandescent and fluorescent lamps. For each pair of 40-watt cool white deluxe fluorescent lamps, use a 75-watt frosted tungsten bulb.

POST-PROCESS TREATMENTS

Spotting and Retouching

Retouch or spot this material with the same methods used for KODAK EKTACOLOR Papers. The dye stability of this material will not be affected if the instructions given in KODAK Publication E-70, *Retouching Prints on KODAK EKTACOLOR and EKTACHROME Papers*, are followed.

Laminating Prints

You can laminate prints on DURAFLEX Plus Digital Display Material. Laminate both sides of identification cards to protect against moisture.

Notice: Many municipalities have adopted as part of their local fire codes the National Fire Protection Association (NFPA) 701-1999 *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films*, which applies to plastic films used for decorative or other purposes inside buildings. To comply with this standard, you must protect displays using any of these plastic films.

We strongly recommend that you take one or both of the following measures to protect all large displays, especially if the material is displayed in a public area:

- Fully enclose the materials in a light box or an illuminator.
- Frame and laminate the materials to a non-combustible mounting board, wall, glass, or 1/4-inch or thicker polycarbonate, e.g., Lexan, support.

Other standards covering the burning characteristics of these products may apply to markets outside the U.S. Check with the appropriate local agency. Do not use these materials as backdrop displays in theaters.

For more information, see CIS-37, *Combustion of KODAK Films, Resin-Coated Photographic Papers, and Print and Display Materials*.

MORE INFORMATION

For the latest version of technical support publications for KODAK PROFESSIONAL Products, visit Kodak on-line at:
<http://www.kodak.com/go/professional>

If you have questions about KODAK PROFESSIONAL Products,
call Kodak.

In the U.S.A.:

1-800-242-2424, Ext. 19, Monday–Friday
9 a.m.–7 p.m. (Eastern time)

In Canada:

1-800-465-6325, Monday–Friday
8 a.m.–5 p.m. (Eastern time)

Note: The Kodak materials described in this publication are available from dealers who supply KODAK PROFESSIONAL Products. You can use other materials, but you may not obtain similar results.



Kodak Professional Division
EASTMAN KODAK COMPANY

Kodak Professional