

# KODAK Production Backlit Film / 7mil



## GENERAL DESCRIPTION

Production Backlit Film offers vivid colors and an exceptional white point for dramatic short-term front print backlit applications. The inkjet coating is designed to provide exceptional saturation at an attractive price for any job.

- Front print for excellent saturation even in high ambient light conditions
- Vivid colors
- Exceptional white point
- Economic polypropylene base
- Optimized for thermal dye applications

## COMPATIBILITY

When used with the following printers and inks, KODAK Production Backlit Film / 7mil are recommended for all applications. Recommendations will provide optimal output when using printing paths commonly associated with each printer. These settings are intended as starting points—other combinations of settings may also provide good results. See "Printing Notes" for more information. "Yes" in the Laminate Recommendation column indicates that this media is likely to have good adhesion with laminates in that class.

For compatibility information for all KODAK Wide-Format Inkjet Media, refer to the Inkjet Media Compatibility Chart at [www.kodak.com/go/wideformat](http://www.kodak.com/go/wideformat)

Manufacturer	Model	Ink Compatibility		Laminate Recommendation (See Finishing Section)			
		Ink	Print Driver Media Setting	Heat Activated Thermal 210-240°F (99-116°C)	Heat Activated Low Temperature 185-195°F (85-91°C)	Heat Assisted 185-195°F (85-91°C)	Pressure Sensitive Ambient to 120°F (49°C)
KODAK PROFESSIONAL	4000 Series	LIGHTFAST PLUS Dye (4 color only)	See Printing Notes (1x4 and 2x4 only)	No	No	Yes	Yes
ENCAD NOVAJET	500/600 700/ 800	GS, GS+ Dye	See Printing Notes	No	No	Yes	Yes
ENCAD NOVAJET	500/600 700/ 800	GX Dye (4 color only)	See Printing Notes (1x4 and 2x4 only)	No	No	Yes	Yes
ENCAD NOVAJET/ KODAK	1000i/ 1200i	Qi Dye	See Printing Notes; Printer Heater Setting: 1	No	No	Yes	Yes
HEWLETT-PACKARD DESIGNJET	2000/2500 2800/3000 3500/3800 CP	Dye	<b>High-Gloss Photo</b>	No	No	Yes	Yes
HEWLETT-PACKARD DESIGNJET	5000 Series	Dye	<b>Photo Imaging Gloss</b>	No	No	Yes	Yes
CANON	7250D/7200D 8200D/8400D	Dye	<b>Coated Paper</b>	No	No	Yes	Yes
COLORSPAN DISPLAYMAKER	Hi-Res 8 Esprit Series XII	EC (4 color only)	See Printing Notes	No	No	Yes	Yes

## PRINTING NOTES

The Print driver media settings recommended in the Compatibility section are intended to provide usable results with available media profiles found in the printer manufacturer's provided drivers and RIPs. These recommendations will provide proper ink laydowns with no pooling or bleeding, and color which will be acceptable for many applications. It is suggested that tests be run using these recommendations and color corrections be made to meet user expectations.

In cases where no recommendation is made, choose the media setting closest to the KODAK Wide-Format Inkjet Media you are using. For example, if you are printing on KODAK Premium Photographic Glossy Paper / 180g, choose a setting in your driver or RIP which is intended for another glossy photo paper. This should give you a print which requires little or no adjustment to get usable results.

### RIPs and Profiles for ENCAD and Other Printers

For more exacting color, several third party RIPs (Raster Image Processors) are available with profiles supporting KODAK media for ENCAD, KODAK and other printers. For more information visit KODAK 's website at [www.kodak.com/go/wfiprofiles](http://www.kodak.com/go/wfiprofiles)

Following is a list of RIPs for which ENCAD/KODAK printer support and KODAK-built media profiles are available:

ENCAD	<a href="http://www.encad.com/Support/RIP-Support/index.asp">www.encad.com/Support/RIP-Support/index.asp</a>
COLORGATE PHOTO RIP	<a href="http://www.colorgate.com/home_e/products_e.html">www.colorgate.com/home_e/products_e.html</a>
ONYX GRAPHICS	<a href="http://www.onyxgfx.com">www.onyxgfx.com</a>
SCANVEC AMIABLE	<a href="http://www.scanvecamiable.com">www.scanvecamiable.com</a>

In addition to the above list, the following software companies provide RIPs and profiles that support ENCAD/KODAK printers:

BEST GMBH	<a href="http://www.bestcolor.com/bcint/index.htm">www.bestcolor.com/bcint/index.htm</a>
AIT INTERNATIONAL	<a href="http://www.applied-image.com/Shiraz-RIP.htm">www.applied-image.com/Shiraz-RIP.htm</a>
IMAGE TECHNOLOGIES	<a href="http://www.imagetechdev.com">www.imagetechdev.com</a>
GLOBAL GRAPHICS	<a href="http://www.globalgraphics.com">www.globalgraphics.com</a>
COLORBURST SYSTEMS	<a href="http://www.compatsys.com">www.compatsys.com</a>
WASATCH COMPUTER TECHNOLOGY, INC.	<a href="http://www.wasatchinc.com">www.wasatchinc.com</a>
CADLINK TECHNOLOGY	<a href="http://www.cadlink.com">www.cadlink.com</a>
JET RIP	<a href="http://www.jangeun.co.kr">www.jangeun.co.kr</a>

## Custom Profiles

While the above printing recommendations and available profiles from KODAK will provide adequate results for many wide-format inkjet applications, there are applications, such as inkjet proofing, which demand more exacting color requirements. It is suggested that for these applications, custom profiles be built for given ink/media/printer combinations. Many color management and profile building software applications are available which allow the user to manage color to meet their needs. Also, many RIPs will provide color profiling options which allow the user to control the color of their output. Please contact your dealer or KODAK technical support for help determining the best solution for your application.

## Viewing and Taking Density Readings

When creating profiles for media that is viewed by transmissive light, use transmission measurement devices. Transmission measurement devices, especially those which are strip readers, often need to be calibrated several times before they are ready to take density readings.

If a transmission measurement device is not available, acceptable profiles can be created with a reflective device by placing the media printed side up on white paper (a piece of inkjet paper will work) when making measurements. Results may be slightly lighter and less saturated than when a true transmission device is used, but it will provide you with a good starting point and, if necessary, you can adjust the brightness and colors with your RIP or image manipulation software.

## Printer Heater and Dryer Settings

Do not use heat for added drying, if it is available as an option on your printer. Heat will cause the base of this media to buckle potentially causing damage to your printer. Fans only, if they are available, should provide sufficient drying.

## ENCAD Printers with GX 8-Color Inkset

We do *not* recommend printing with this media on multiple ink printer configurations, such as GX 8-Color. Many media types with this type of inkjet receiving layer will undergo an undesirable color shift after printing when printed with multiple dilutions of ink. This does not occur with 4-color GX ink configurations. GS+ 8-color configurations are less susceptible to this issue.

## HEWLITT-PACKARD Printers

Some backlit medias may not work properly with the media sensors on printer take-up spools, such as those supplied with the HP DESIGNJET 5000 and 5500. When this happens, tape a cut piece of the same media over both the front and back media take-up sensors. This will provide enough density for the take-up spool to work correctly. Be sure to remove these pieces when using other types of media or the take-up spool will not operate correctly.

In low humidity environments many types of film-based media will show static marks when printed on HP DESIGNJET 5000 series printers. These marks, which appear as low density ink blotches aligned with the bottom rubber rollers, are noticeable in areas which are intended to be white and are next to high density areas, such as large black text. The marks are not present within image areas. To help reduce or eliminate these static marks, try one or all of the following suggestions:

- Operate the printer in a higher humidity environment or place a humidifier near the printer. The static marks will virtually disappear as the humidity is higher, at about 45% RH or higher.
- Print at slower speeds. This will cause less static buildup and make the marks less noticeable.
- Add a 1% or higher fill color for CMYK in white areas; the exact amount to be determined by testing in your working environment. It has been demonstrated in a 30% RH environment that filling white areas with a 1% dot for all 4 channels, C, M, Y, and K, will virtually remove the marks. The resulting light gray in white areas is not objectionable, especially when prints are trimmed so that no unprinted media is visible as a reference. The fill color can be added in the application that the file was created in or within your RIP software. In ONYX POSTERSHOP, simply use the "Replace Color" tool, select white, and add 1% to all 4 colors.



### Caution

**Caution:** When using film based medias on printers in very low humidity conditions, 30% or lower, static charges may be enough to damage your printer. It is not recommended that you print in these conditions. Be sure to follow your printer manufacturers guidelines for operating conditions, which are especially critical when using film based medias.

## HANDLING

All inkjet media must be handled with care before and after printing to prevent damage to the ink receiving layer and printed images. Use the following guidelines, your experience, and common sense for the proper care of your media.

- Store unused media in its original packaging, using

the core-plugs and plastic sleeves.

- Allow media to acclimate to your environmental conditions for at least 24 hours before use.
- KODAK inkjet media is rolled printable side out. Avoid touching the printable side by handling by the edges of the roll.
- Wear cotton gloves when handling media to avoid scratches, abrasions and fingerprints from moisture and oils on your hands.
- Do not allow the media to come into contact with moisture. Moisture will damage many types of inkjet medias before and after printing.
- Avoid handling, trimming, laminating or other finishing until prints are completely dry. Dry times will vary based on media type, ink type and environmental conditions.
- Do not fold, bend or crease media or damage may occur to the ink receiving layer.
- Do not allow the surface of the media to come into contact with itself or another inkjet media.
- Use media only in recommended operating conditions—see "Physical Characteristics" section.

## Curl

Most types of roll-based inkjet media will exhibit some amount of curl, either toward the base side or toward the print side. This will vary based on media type and environmental conditions. Some media will curl more in low humidity environments and others in high humidity environments. Also, media may curl more towards the core or end of the roll due to "roll memory."

Although curl is mainly an issue when printing, it can also have an impact on laminating and other finishing procedures. Follow these guidelines, and use your experience and common sense to avoid issues caused by curl.

### When printing:

- Advance media several inches past the print platen before starting a print job.
- Add weights or clips to the leading edge of the media.
- Attach media to the printer's take-up spool before starting printing.
- Adjust vacuum settings accordingly on printers equipped with variable media vacuum settings.
- Adjust heater and dryer settings on equipped printers to obtain optimum conditions to ensure flat media. See printer owners' manual for their recommendations.

### During finishing:

- Reverse wind media, when completely dry, to counteract roll memory.
- Do not allow media to remain rolled for extended periods of time.
- Rough cut prints and lay them flat before laminating.

## FINISHING

Detailed information and tips can be found in KODAK publication E-2600, *Laminating, Mounting, and Finishing KODAK Wide-Format Inkjet Media*.

### Lamination

Refer to "Laminate Compatibility" in the Compatibility section for specific printer/ink/laminate recommendations.

#### Lamination Definitions

<b>Heat Activated Thermal, 210-240°F (99-116°C)</b>	Polyester laminates applied with hot roll laminators at 210-240°F.
<b>Heat Activated Low Temperature, 185-195°F (85-91°C)</b>	Polyester laminates applied with hot roll laminators at 185-195°F.
<b>Heat Assisted, 185-195°F (85-91°C)</b>	Polyester or vinyl laminates with pressure sensitive adhesives; specially formulated for inkjet prints, and applied with hot roll laminators at 185-195°F.
<b>Pressure Sensitive, Ambient to 120°F (49°C)</b>	Polyester or vinyl laminates with pressure sensitive adhesives on a release liner, applied at ambient conditions or at low temperature, 100-120°F.

\* For both Heat Activated Thermal and Low Temperature, use a laminate with a total thickness (polyester and adhesive) of 3 mils or less on the face side. Thicker laminates may be applied to the back of the print for increased total thickness.

### Mounting

For a rigid, durable backlit display, laminate this media and mount it to PLEXIGLASS with an optically clear mounting adhesive. A low-glare front laminate is desirable to reduce reflections in brightly lit areas. In view boxes that have PLEXIGLASS in them already, mounting is not necessary, and a thicker (10-mil) surface laminate may offer enough rigidity for the print to lay flat. For extra rigidity or for larger displays, laminate the back of the print with a laminate equally thick as the front material.

## DISPLAY

KODAK inkjet media is intended for display in typical home, office, and retail environments. Unusual conditions, such as extreme temperatures or humidity, may affect the expected lifetime of the displayed print. KODAK is unable to test all possible environments, so it is recommended to test display conditions when possible to be sure that the media meets the necessary requirements.

## PERFORMANCE GUARANTEE

### Indoor Applications (Fluorescent Display)

KODAK will guarantee prints from compatible systems against noticeable fading, cracking, yellowing, and bleeding when the print is viewed from its intended viewing distance.

The Indoor Performance Guarantee durations will vary based on the media/printer/ink system. The stated durations assume the media is displayed indoors under fluorescent light (average intensity 450-lux, 12 hours/day), and/or with indirect sunlight exposure (at least 6 feet from a window, with no direct sunlight). PLEXIGLASS™, LEXAN™, or a similar sheet must protect prints, and lightbox illumination is expected to not exceed 5000-lux fluorescent. The guarantee covers both laminated or unlaminated prints as noted in the table below. The unlaminated guarantee assumes the media will be displayed in a typical office environment and will not be exposed to a high level of pollutants (above a typical ozone level for an office environment).

Terms, conditions and additional information about the Performance Guarantee can be found at:

[www.kodak.com/go/wideformat](http://www.kodak.com/go/wideformat).

Manufacturer	Model	Ink	Durability
HEWLETT-PACKARD DESIGNJET	2000/3000/5000 Series	4/6 Color Dye	6 months laminated
ENCAD NOVAJET	800, 700, 600, 500 Series	4/8 Color GS+	3 months laminated
		4 Color GX	18 months laminated
ENCAD NOVAJET/ KODAK	1000i/ 1200i	Qi Dye	18 months laminated
CANON	7250D/7200D/8200D/8400D	6 Color Dye	3 months laminated

### Additional Durability Information

The following table can be used as a guide for printers and inks not included in the Performance Guarantee.

#### Durability Guidelines for Printers Not Included in Performance Guarantee

If Using	Expect Durability Similar To:
KODAK PROFESSIONAL LIGHTFAST PLUS Dye (1x4)	ENCAD GX
COLORSPAN EC Dye (1x4)	ENCAD GX

## ORDERING INFORMATION

### KODAK Production Backlit Film / 7mil

Roll Length	Roll Width / Order No.				
	24 in. (61 cm)	36 in. (91.4 cm)	42 in. (106.7 cm)	50 in. (127 cm)	60 in. (152.4 cm)
100 ft (30.5 m)	NA	222778-00	222779-00	222780-00	222781-00
16.4 ft (5 m) (sample)	222777-00	NA	NA	NA	NA

## PHYSICAL CHARACTERISTICS

Physical Characteristics	Value	Test Method Reference
Caliper	7 mil (178 $\mu$ m)	ISO 534
Opacity	>55	Tappi T 524
CIE Whiteness	92	Tappi T 524
Weight	205 g/sm	ISO 536
Brightness	86	Tappi T 524
60-degree Gloss	>75	ISO 7668
L*(D65/10 uvi/BBW)	93	Tappi T 524
Flame Spread Classification	Class B	ASTM E84
Operating Conditions	59-86°F (15-30°C), 30-70% RH (non-condensing)	
Recommended Storage Conditions	68°F (20°C), 50% RH	

If you have questions or need assistance, visit KODAK's website at [www.kodak.com/go/wfisupport](http://www.kodak.com/go/wfisupport) or, in the U.S., contact KODAK Technical Support at 1-888-436-2347.

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**EASTMAN KODAK COMPANY • ROCHESTER, NY 14650**

**Kodak**