KODAK Reverse Print
Backlit Film / 6mil

Kodak

GENERAL DESCRIPTION

This translucent polyester material offers excellent image durability due to its high-gloss, scratch-resistant coating. Brilliant color images can be printed in reverse on the coated side of the film and displayed in light boxes, lit window displays or other backlit applications indoors or outdoors.

- Translucent, 6-mil polyester view-through base for excellent durability and quick drying
- Heavy weight for robust handling
- Broad printer compatibility with piezo and thermal dye (reverse print) and pigmented inks (direct print)
- Reverse print provides built-in image protection

COMPATIBILITY

When used with the following printers and inks, KODAK Reverse Print Backlit Film / 6mil is 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.

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)
HEWLETT-PACKARD DESIGNJET	800/1050C/ 1055CM	Dye	See Printing Notes	No	No	Yes	Yes
HEWLETT-PACKARD DESIGNJET	2000, 2500, 2800, 3000, 3500, 3800 CP	Dye UV	See Printing Notes	No	No	Yes	Yes
HEWLETT-PACKARD DESIGNJET	5000 Series	Dye	**Paper Semi-Gloss**	No	No	Yes	Yes
HEWLETT-PACKARD DESIGNJET	5000 Series	UV	See Printing Notes	No	No	Yes	Yes
ENCAD NOVAJET	PROe	GS, GX, GO+	See Printing Notes	No	GS: No GX, GO+: Yes	Yes	Yes
ENCAD NOVAJET	500	GS, GX, GO+	See Printing Notes	No	GS, GO+: No GX: Yes	Yes	Yes
ENCAD NOVAJET	600/700 Series	GS+, GX, GO+	See Printing Notes	No	No	Yes	Yes
ENCAD NOVAJET	850	GS+, GX, GO+	See Printing Notes	No	No	GS+[a], GX: Yes GO+: No	Yes
ENCAD NOVAJET/ KODAK	1000i/ 1200i	Qi Dye	See Printing Notes; Printer Heater Setting: 2	Yes	No	No	Yes
ENCAD NOVAJET/ KODAK	1000i/ 1200i	Qi Pigment	See Printing Notes; Printer Heater Setting: 2	Yes	No	Yes	Yes
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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)
CANON	W6000/ W8000 Series	Pigment	**Backlight Film**	No	No	Yes	Yes
CANON	7250D/7200D/ 8200D/8400D	Dye	**Backprint Film**	No	No	Yes	Yes
COLORSPAN DISPLAYMAKER	Hi-Res 8	EC, PC	**TransWhite**	No	No	EC: Yes PC: No	Yes
COLORSPAN DISPLAYMAKER	Esprit / Series XII	EC, PC	See Printing Notes	No	No	EC: Yes PC: No	Yes
MUTOH FALCON	RJ-4100, RJ-6100	Dye Pigment	See Printing Notes	No	No	No	Yes
ROLAND	Hi-Fi Jet FJ-50/FJ-40, Hi-Fi Jet Pro FJ-400/FJ-500/FJ-600	Dye Pigment	See Printing Notes	No	No	No	Yes
EPSON STYLUS PRO	7000/9000	Dye	**Photo Quality Inkjet Paper**	No	No	No	Yes
EPSON STYLUS PRO[C]	7500/9500	Pigment	**Double Weight Matte Paper**	No	No	No	Yes
EPSON STYLUS PRO	7600/9600/ 10000/10600	Photo Dye	**Heavy Polyester Banner**	No	No	No	Yes
EPSON STYLUS PRO	10000/10600	Archival Pigment	**Backlight Film**	No	No	No	Yes
EPSON STYLUS PRO	7600/9600/ 10600	ULTRA-CHROME Pigment	**Backlight Film**	No	No	No	Yes
EPSON STYLUS PRO	7800/9800	ULTRA-CHROME K3 Pigment	**Enhanced Matte Paper**	No	No	No	Yes

[a]Laminates with vinyl film type work best.

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

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

ENCAD	www.encad.com/Support/RIP-Support/ index.asp
COLORGATE PHOTO RIP	www.colorgate.com/home_e/ products_e.html
ONYX GRAPHICS	www.onyxgfx.com
SCANVEC AMIABLE	www.scanvecamiable.com

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

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

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

Images printed on a reverse print backlit material should be printed with the mirror image mode turned on in your RIP software so that they appear in their proper orientation when displayed. This is true for viewing the media and when taking measurements for building a profile.

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 down 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.

For best results using pigment-based inks, view this media through the coating (printing) side, rather than the base side. This will help to enhance density and color saturation.

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

Heat Activated Thermal, 210-240°F (99-116°C)*	Polyester laminates applied with hot roll laminators at 210-240°F.
Heat Activated Low Temperature, 185-195°F (85-91°C)*	Polyester laminates applied with hot roll laminators at 185-195°F.
Heat Assisted, 185-195°F (85-91°C)	Polyester or vinyl laminates with pressure sensitive adhesives; specially formulated for inkjet prints, and applied with hot roll laminators at 185-195°F.
Pressure Sensitive, Ambient to 120°F (49°C)	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.

For best results, use inkjet-specific laminate products and follow the laminate manufacturer's instructions. It is important that your print be dry before laminating. Lamination performance varies as a function of materials, technique, and environmental conditions. For increased durability, choose a laminate with UV protection. For additional protection from moisture, encapsulate the image leaving a 1/4" or greater edge border. For increased rigidity or for larger displays, laminate the front and back with equally thick material.

For a rigid, durable backlit display, adhere the print side (matte side) of this media to extruded acrylic with an optically clear mounting adhesive. No lamination is necessary on the glossy polyester abscised of this material. In view boxes that have extruded acrylic sheets in them already, mounting is not necessary. Simply drop the laminated image between the sheets of acrylic. If desired, a thicker laminate, such as 5 mil or greater, will offer increased rigidity for these applications.

For more information, see Kodak Publication PPI-856, *Application Guidelines*, at www.kodak.com/go/wideformat.

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.

Do not use this media in a light box or area where the temperature exceeds 80°C (176°F). As with all film-based media, exposure to high temperatures will cause the base to warp or buckle.

PERFORMANCE GUARANTEE

Indoor Performance Guarantee

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.

Manufacturer	Model	Ink	Durability
KODAK PROFESSIONAL	3043/3062	6 Color Dye	1 month 3 months laminated
		6 Color Pigment	1 year
HEWLETT-PACKARD DESIGNJET	5000 Series	6 Color Dye	3 months
		6 Color UV	1 year
	2xxx/3xxx	4 Color Dye	3 months
		4 Color UV	1 year
ENCAD NOVAJET	800/700/600/500 Series	4/8 Color GS+	1 month
		4/8 Color GX	1 year
		4/6/8 Color GO+	1 year[a]
ENCAN NOVAJET / KODAK	1000i/ 1200i	Qi Dye	6 months laminated
		6 Color Qi Pigment	2 years
EPSON STYLUS PRO	7600/9600/10000/10600	6 Color Photographic Dye	1 month
	10000/10600	6 Color Archival Pigment	1 year
	7000/9000	6 Color Dye	1 month
	9500	6 Color Pigment	1 year
	7600/9600/10600	7 Color ULTRACHROME Pigment	1 year
	7800/9800	8 Color ULTRACHROME K3 Pigment	1 year
CANON	7250D/7200D/ 8200D/8400D	6 Color Dye	3 months
CANON	W6000/W8000 Series	6 Color Pigment	1 year

[a]When displayed behind protective PLEXIGLASS or other similar material.

Outdoor Applications

Outdoor exposure, including exposure to ultraviolet radiation, moisture, oxidation, and chemical pollutants all influence the final outdoor longevity of a graphic image. Kodak guarantees that the effects of those exposures will not affect the quality and suitability of the graphic image print, based on accepted industry test standards, for advertising purposes and other customary outdoor display uses. Specifically, Kodak guarantees prints from the systems below against excessive fading, peeling, cracking, yellowing, bleeding, and running for the periods stated below. Lightbox illumination is expected to not exceed 5000-lux fluorescent.

Terms, conditions and additional information about the Performance Guarantee can be found at www.kodak.com/go/wideformat.

Manufacturer	Model	Ink	Durability
HEWLETT-PACKARD DESIGNJET	5000 Series	6 Color UV	6 months
	2xxx/3xxx	4 Color UV	6 months
ENCAD NOVAJET	800/700/600/500 Series	4 Color GO+	6 months[a]
		6 Color GO+	6 months[a]
		8 Color GO+	6 months[a]
ENCAD NOVAJET/ KODAK	1000i/ 1200i	4 Color Qi Pigment	6 months[a]
		6 Color Qi Pigment	4 months[a]
EPSON STYLUS PRO	10000/10600	6 Color Archival Pigment	6 months
	9500	6 Color Pigment	6 months
	7600/9600/10600	7 Color ULTRACHROME Pigment	4 months
	7800/9800	8 Color ULTRACHROME K3 Pigment	4 months
CANON	W6000/W8000 Series	6 Color Pigment	6 months

[a]When displayed behind protective PLEXIGLASS or other similar material.

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	ENCAD GX
COLORSPAN EC Dye	ENCAD GX
COLORSPAN PC Pigment	ENCAD GO+
ROLAND Dye	EPSON 9000 Dye
ROLAND Pigment	EPSON 9500 Pigment
MUTOH Dye	EPSON 9000 Dye
MUTOH Pigment	EPSON 9500 Pigment

ORDERING INFORMATION

KODAK Reverse Print Backlit Film / 6mil

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	189 3064	879 4828	157 8194	144 6830
16.4 ft (5 m) (sample)	224842-00	NA	NA	NA	NA

NA = Not available

PHYSICAL CHARACTERISTICS

Physical Characteristics	Value	Test Method Reference
Caliper	6 mil (152 µm)	ISO 534
Opacity	53	Tappi T 524
CIE Whiteness	101	Tappi T 524
Weight	190 g/sm	ISO 536
Brightness	90	Tappi T 524
60-degree Gloss	<5 print side (matte), >100 backside (glossy)	ISO 7668
L*(D65/10 uvi/BBW)	>95	Tappi T 524
Flame Spread Classification	Class A	ASTM E84
Operating Conditions	59-86°F (15-30°C), 30-60% 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 or, in the U.S., contact Kodak Technical Support at 1-888-436-2347.
The contents of this publication are subject to change without notice.

EASTMAN KODAK COMPANY • ROCHESTER, NY 14650

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