

KODAK Water-Resistant Reinforced Flex Banner / 15 mil

GENERAL DESCRIPTION

For indoor and outdoor signage, banners, and trade-show displays with excellent image quality and durability.

- A 15-mil tear-resistant polyester fabric embedded between two white PVC layers providing excellent opacity
- Compatible with most thermal and piezo dye and pigmented inks
- Water-resistant for outdoor applications when printed with thermal or piezo pigmented inks
- Can be sewn, grommeted, and draped

COMPATIBILITY

When used with the following printers and inks, KODAK Water-Resistant Reinforced Flex Banner / 15 mil 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.encad.com.

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	3038/3043/3062	Dye*, Pigment	See Printing Notes	No	No	No	Yes
KODAK PROFESSIONAL	4000 Series	Pigment	See Printing Notes	No	No	No	Yes
HEWLETT-PACKARD DesignJet	800/1000	Dye	Coated Paper	No	No	No	Yes
HEWLETT-PACKARD DesignJet	2000, 2500, 2800, 3000, 3500, 3800 CP	Dye*	Coated Paper	No	No	No	Yes
HEWLETT-PACKARD DesignJet	2000, 2500, 2800, 3000, 3500, 3800 CP	UV	Coated Paper	No	No	No	Yes
HEWLETT-PACKARD DesignJet	5000 Series	Dye	HW Coated Paper	No	No	No	Yes
HEWLETT-PACKARD DesignJet	5000 Series	Dye	Colorfast Vinyl	No	No	No	Yes
ENCAD NovaJet	ProE/500/600/700/800 Series	GS, GS+	See Printing Notes	No	No	No	Yes
ENCAD NovaJet	ProE/500/600/700/800 Series	GX*	See Printing Notes	No	No	No	Yes
ENCAD NovaJet	ProE/500/600/700/800 Series	GO+	See Printing Notes	No	No	No	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)
ENCAD NovaJet	1000i	Qi Dye	See Printing Notes; Printer Heater Setting: 2	Yes	Yes	Yes	Yes
ENCAD NovaJet	1000i	Qi Pigment	See Printing Notes; Printer Heater Setting: 2	Yes	Yes	Yes	Yes
COLORSPAN Displaymaker	Hi-Res 8, Esprit/Series XII	EC*, PC	See Printing Notes	No	No	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*	Presentation Matte Paper	No	No	No	Yes
EPSON Stylus Pro	7600/9600/ 10000/10600	Photographic Dye*	Heavyweight Polyester Banner	No	No	No	Yes
EPSON Stylus Pro	7500/9500	Pigment	Double Weight Matte Paper	No	No	No	Yes
EPSON Stylus Pro	10000/10600	Archival Pigment	Heavyweight Polyester Banner	No	No	No	Yes
EPSON Stylus Pro	7600/9600	Ultra Chrome Pigment	Heavyweight Polyester Banner	No	No	No	Yes
	10600		Enhanced Synthetic Paper				

* For optimum durability, laminate or overcoat soon after printing within 4 hours).

Note: Unlaminated KODAK Water-Resistant Reinforced Flex Banner / 15 mil is not recommended for use with “lightfast” dye inks due to premature fading (which is caused by oxidation). If prints are laminated within 4 hours of printing to seal the image from exposure to air, the print lifetime can be extended—depending on the type of overlamine. “Lightfast” inks include: Encad GX, Ilford Archiva, ColorSpan EnduraChrome, Hewlett-Packard CP dye, and KODAK Lightfast Plus inks.

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 New 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 Encad's website at <http://www.encad.com/Support/RIP-Support/index.asp>

Following is a list of software companies that provide RIPs for the Encad product line. To obtain profiles that are not available for download directly from Encad, as well as complete product descriptions and support, please visit the RIP company's website.

Encad	www.encad.com/Support/RIP-Support/index.asp
Colorgate Photo RIP	www.colorgate.com/home_e/products_e.html
Best GmbH	www.bestcolor.com/bcint/index.htm
Scanvec Amiable	www.scanvecamiable.com
Onyx Graphics	www.onyxgfx.com
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 Encad 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 Encad technical support for help determining the best solution for your application.

Appearance of Media

The tear-resistant polyester fabric embedded in this media creates a subtle grid-like appearance on the surface of the product. This is common in banner medias of this type and will cause no difficulties when printing and finishing. It is a necessary part of the media to provide the toughness and durability required for outdoor banners.

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*.

This product is intended for applications where lamination is not required. However, immediate lamination or overcoat is required when using lightfast inks (see "Note" above) to protect it from premature oxidation fading.

For increased durability and resistance to dirt and abrasion, use a pressure-sensitive vinyl overlaminates. Laminating one side, however, can cause the media to curl toward the laminated side. Allow prints to dry before laminating.

Instead of conventional lamination, use a fast-drying spray over-laminate with UV blockers. Sprays come in aerosols and in larger containers suitable for spray gun/air compressor applications.

This material can be sewn with appropriate industrial equipment to create pockets for rope or hanging rods and for hemming. Be sure to sew image side up, so that only the back of the material comes into contact with the sewing machine foot, which can damage the surface of the media. Use a double-stitched hem with a double lock stitch, with a maximum of five stitches per inch and corner reinforcements. Use colored thread to match image content or a clear, high-strength nylon thread as an all-purpose material. To prevent corner tearing, do not stitch all the way to the edge of the banner. High tack banner tape can also be used for pockets and hems, and may be preferable if the sewing process damages the banner. Try to use rolled or low-pressure folds when creating pockets and hems as heavy creasing can crack and flake the inkjet coating.

Grommets can be installed along the length of a banner through the hem so that they are through two layers of material. For added reinforcement, place corner grommets where the hems cross so that the grommets go through four layers. Use banner tape for extra reinforcement where grommets are placed if hems or pockets are not used.

If wind slits are required, use horizontal slits that are placed at least 18 to 24 inches (46 to 61 mm) apart. Slits should be one foot (30.5 cm) from the banner edge. Use crescent-shaped slits with a round punchhole or added stitch at each end of the slit to prevent further tearing during use.

PERFORMANCE GUARANTEE

Indoor Applications (Fluorescent Display)

Encad 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). 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.encad.com.

Manufacturer	Model	Ink	Durability
KODAK PROFESSIONAL	3043/3062	6 Color Dye	6 months laminated
		6 Color Pigment	1 year
HEWLETT-PACKARD DesignJet	2000/3000/5000 Series	4/6 Color Dye	1 year laminated
		4/6 Color UV	2 years
ENCAD NovaJet	800/700/600/500 Series	4/8 Color GS+	1 month
		4/8 Color GX	1 year laminated
		4/6/8 Color GO+	1 year
	1000i	Qi Dye	1 month unlaminated 3 years laminated
		6 Color Qi Pigment	1 year
EPSON Stylus Pro	7600/9600/10000/10600	6 Color Photographic Dye	1 year laminated
	10000/10600	6 Color Archival Pigment	1 year
	7000/9000	6 Color Dye	6 months laminated
	9500	6 Color Pigment	1 year
	7600/9600/10600	7 Color Ultra Chrome Pigment	1 year

Outdoor Applications

Outdoor exposure, including exposure to ultraviolet radiation, moisture, oxidation, and chemical pollutants all influence the final outdoor longevity of a graphic image. Encad 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, Encad guarantees prints from the systems below against excessive fading, peeling, cracking, yellowing, bleeding, and running for the periods stated below.

Terms, conditions and additional information about the Performance Guarantee can be found at www.encad.com.

Manufacturer	Model	Ink	Durability
KODAK PROFESSIONAL	3043/3062	6 Color Pigment	3 months
HEWLETT-PACKARD DesignJet	2000/3000/5000 Series	4/6 Color UV	6 months
ENCAD NovaJet	800/700/600/500 Series	4/6/8 Color GO+	2 months
	1000i	4 Color Qi Pigment	2 months
		6 Color Qi Pigment	2 months
EPSON Stylus Pro	10000/10600	6 Color Archival Pigment	3 months
	9500	6 Color Pigment	3 months
	7600/9600/10600	7 Color Ultra Chrome Pigment	1 month

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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:
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

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Roll Length	Roll Width / Order No.			
	36 in. (91.4 cm)	42 in. (106.7 cm)	50 in. (127 cm)	60 in. (152.4 cm)
40 ft (12.2 m)	220726-00	220727-00	220728-00	220729-00
16.4 ft (5 m) (sample)	220730-00	NA	NA	NA

NA = Not available

PHYSICAL CHARACTERISTICS

Physical Characteristics	Value	Test Method Reference
Caliper	15 mil (381 μ m)	ISO 534
Opacity	>95	Tappi T 524
CIE Whiteness	112	Tappi T 524
Weight	445 g/sm	ISO 536
Brightness	94	Tappi T 524
60-degree Gloss	<5	ISO 7668
L*(D65/10 uvi/BBW)	95	Tappi T 524
Flame Spread Classification	Class B	ASTM E84
Operating Conditions	59-86°F (15-30°C), 20-70% RH (non-condensing)	
Recommended Storage Conditions	68°F (20°C), 50% RH	

* MD = machine direction; CD = cross direction

If you have questions or need assistance, visit Encad's website at www.encad.com, or in the U.S. contact Encad Technical Support at 1-877-362-2387.

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