TECHNICAL DATA / **WIDE-FORMAT INKJET MEDIA**          **March 2004 • E-2627**

# KODAK Water-Resistant Removable Vinyl

## GENERAL DESCRIPTION

For durable, cost-effective indoor and outdoor signs, exhibition panels, and posters.

- 6.0 mil vinyl with a removable, repositionable, pressure-sensitive adhesive
- Easily mountable and removable on most smooth surfaces
- Matte surface for nearly reflection-free viewing at any angle
- Waterfast with pigment inks

## COMPATIBILITY

When used with the following printers and inks, KODAK Water-Resistant Removable Vinyl 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.**

| | | Ink Compatibility | | Laminate Recommendation (See Finishing Section) | | | |
|---|---|---|---|---|---|---|---|
| **Manufacturer** | **Model** | **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 | 3000 Series | Dye*, Pigment | See Printing Notes | No | Yes | Yes | Yes |
| KODAK PROFESSIONAL | 4000 Series | Pigment | See Printing Notes | No | Yes | Yes | Yes |
| HEWLETT-PACKARD DesignJet | 800 | Dye | See Printing Notes | No | Yes | Yes | Yes |
| HEWLETT-PACKARD DesignJet | 1050/1055CM | Dye | See Printing Notes | No | Yes | Yes | Yes |
| HEWLETT-PACKARD DesignJet | 2000/2500/ 2800/3000/ 3500/3800 CP | Dye* | See Printing Notes | No | Yes | Yes | Yes |
| HEWLETT-PACKARD DesignJet | 5000/5500 | Dye* | See Printing Notes | No | Yes | Yes | Yes |
| HEWLETT-PACKARD DesignJet | 2000/2500/ 2800/3000/ 3500/3800 CP | UV Pigment | See Printing Notes | No | Yes | Yes | Yes |
| HEWLETT-PACKARD DesignJet | 5000/5500 | UV Pigment | **HW Coated Paper** | No | Yes | Yes | Yes |
| ENCAD NovaJet | ProE/500/600/ 700 Series | GS, GS+, GX*, GO | See Printing Notes | No | No | No | Yes |
| ENCAD NovaJet | 800 Series | GX+ | See Printing Notes | No | No | No | Yes |
| *Continued Next Page* | | | | | | | |

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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 | No | Yes | Yes | Yes |
| ENCAD NovaJet | 1000i | Qi Pigment | See Printing Notes; Printer Heater Setting: 2 | No | Yes | Yes | Yes |
| COLORSPAN DisplayMaker | Hi-Res 8, Esprit/Series XII | EC*, PC | See Printing Notes | No | No | Yes | Yes |
| MUTOH Falcon | RJ-4100/ RJ-6100 | Dye*, Pigment | See Printing Notes | No | No | Yes | Yes |
| ROLAND Hi-Fi Jet | Hi-Fi Jet FJ-50/ FJ-40, Hi-Fi Jet Pro FJ-400/ FJ-500/FJ-600 | Dye*, Pigment | See Printing Notes | No | No | Yes | Yes |
| EPSON Stylus Pro | 7000/9000 Series | Dye* | **Double Weight Matte Paper** | No | Yes | Yes | Yes |
| EPSON Stylus Pro | 7600/9600/ 10000/10600 | Photographic Dye* | **Double Weight Matte Paper** | No | Yes | Yes | Yes |
| EPSON Stylus Pro | 7500/9500 | Pigment | **Double Weight Matte Paper** | No | No | Yes | Yes |
| EPSON Stylus Pro | 7600/9600/ 10600 | Ultra Chrome Pigment | **Double Weight Matte Paper** | No | No | Yes | Yes |
| EPSON Stylus Pro | 10000/10600 | Archival Pigment | **Double Weight Matte Paper** | No | No | Yes | Yes |

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

**Note:** KODAK Water-Resistant Removable Vinyl is not recommended for use with "lightfast" dye inks unlaminated 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 overlaminate. "Lightfast" inks include: Encad GX 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.

## HANDLING

Self-adhesive inkjet media must be handled with extreme are before and after printing, since it will tend to lift and separate from the release liner, causing problems with printing and mounting. To keep this from happening:

- 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 bythe edges of the roll.

- Wear cotton gloves when handling media to avoid scratches, abrasions and fingerprints frommoisture 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.

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**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.

This product is designed for a one-step mounting solution. It should only be used for applications where you intend to mount or adhere the print to a substrate. It is important that your print be dry before laminating. For best results, use inkjet-specific laminate products and follow laminate manufacturer's instructions. Lamination performance varies as a function of materials, technique, and environmental conditions. For increased durability, choose a laminate with UV protection.

### Mounting

Prints can be mounted, laminated or not, to a variety of materials, including poster board, foam board, Sintra, Lexan and more. Use inkjet-specific adhesive materials and follow the manufacturer's instructions. This product has a removable adhesive and is geared towards applications where you intend to remove the print from substrate after use. In order to ensure that longer-term applications remain mounted we recommend you wrap image around substrate and/or frame the print to ensure edges remain intact for length of the application.

### Removal

The adhesive on this product is considered removable and should be easy to remove for at least 6 months. However, the longer the media is adhered to another surface, generally the harder removal will be. The ability to reposition the print will depend on the nature of the surface it is initially mounted on. If a residue remains after the vinyl is removed, use soapy water and aggressive rubbing. Where high adhesion occurred (e.g., stainless steel), you may need to use isopropyl or rubbing alcohol.

## 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 | 1 year laminated |
| | | 6 Color Pigment | 1 year |
| HEWLETT-PACKARD DesignJet | 5000 Series | 6 Color Dye | 1 year laminated |
| | | 6 Color UV | 1 year |
| | 2000/3000 Series | 4 Color Dye | 1 year laminated |
| | | 4 Color UV | 1 year |
| ENCAD NovaJet | 800/700/600/500 Series | 4/8 Color GS+ | 1 month unlaminated 1 year laminated |
| | | 4/8 Color GX | 1 year laminated |
| | | 4/6/8 Color GO+ | 1 year |
| | 1000i | Qi Dye | 1 month unlaminated 1 year laminated |
| | | 6 Color Qi Pigment | 1 year |
| EPSON Stylus Pro | 7600/9600/10000/10600 | 6 Color Photographic Dye | 1 year laminated |
| | 7500/9500 | 6 Color Pigment | 1 year |
| | 10000/10600 | 6 Color Archival Pigment | 1 year |
| | 7000/9000 | 6 Color Dye | 1 year laminated |
| | 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 | 6 months unlaminated 9 months laminated |
| HEWLETT-PACKARD DesignJet | 2000/3000/5000 Series | 4/6 Color UV | 6 months unlaminated 18 months laminated |
| ENCAD NovaJet | 800/700/600/500 series | 4/6/8 Color GO+ | 6 months unlaminated 1 year laminated |
| | 1000i | 4 Color Qi Pigment | 7 months |
| | | 6 Color Qi Pigment | 6 months |
| EPSON Stylus Pro | 7500/9500 | 6 Color Pigment | 6 months unlaminated 9 months laminated |
| | 10000/10600 | 6 Color Archival Pigment | 6 months unlaminated 9 months laminated |
| | 7600/9600/10600 | 7 Color Ultra Chrome Pigment | 1 month unlaminated 3 months laminated |

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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: |
|---|---|
| Kodak Pigment | Encad GO+ |
| Colorspan EC | Encad GX |
| Colorspan PC | 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 Water-Resistant Removable Vinyl**

| 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) |
| 60 ft (18.3 m) | 221621-00 | 221622-00 | 221623-00 | 221624-00 |
| 16.4 ft (5 m) (sample) | 221625-00 | NA | NA | NA |

NA = Not available

### PHYSICAL CHARACTERISTICS

| Physical Characteristics | Value | Test Method Reference |
|---|---|---|
| Caliper | 13 mil (330 µm) including backing/adhesive; 6 mil (152 µm) without | ISO 534 |
| Brightness | 92 | Tappi T 524 |
| Opacity (with liner) | >95 | Tappi T 524 |
| CIE Whiteness | 103 | Tappi T 524 |
| Weight (with liner, without liner) | 320 g/sm, 180 g/sm | ISO 536 |
| 60-degree Gloss | </=5 | ISO 7668 |
| L*(D65/10 uvi/BBW) | >95 | Tappi T 524 |
| Adhesive Peel Strength against stainless steel | 2 - 7 N/in | ASTM D1000-93 |
| 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 | |

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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