

# KODAK Premium White Film / 5 mil

## GENERAL DESCRIPTION

Provides exceptional durability and high gloss for frontlit displays

- A glossy, 5-mil opaque polyester film providing high image quality and robust handling properties
- Especially suitable for long-term indoor displays
- Compatible with most thermal and piezo dye inks
- For durable, frontlit displays in high-traffic areas

## COMPATIBILITY

When used with the following printers and inks, KODAK Premium White Film / 5 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](http://www.encad.com).

| Manufacturer              | Model                                 | Ink Compatibility  |  | Laminate Recommendation (See Finishing Section)   |  |   |   |
|---------------------------|---------------------------------------|--------------------|--|---|--|---|---|
|                           |                                       | Ink                | Print Driver Media Setting                       | Heat Activated Thermal<br>210-240°F<br>(99-116°C) | Heat Activated Low Temperature<br>185-195°F<br>(85-91°C) | Heat Assisted<br>185-195°F<br>(85-91°C) | Pressure Sensitive Ambient to<br>120°F (49°C) |
| KODAK PROFESSIONAL        | 3038/3043/3062                        | Dye                | See Printing Notes                               | No  | No   | Not Tested                              | Yes   |
| KODAK PROFESSIONAL        | 4042/4060/<br>4742/4760               | Lightfast Plus Dye | See Printing Notes                               | Yes   | Yes  | Not Tested                              | Yes   |
| KODAK PROFESSIONAL        | 4860                                  | Lightfast Plus Dye | See Printing Notes                               | Yes   | Yes  | Not Tested                              | Yes   |
| HEWLETT-PACKARD DesignJet | 800                                   | Dye                | <b>High-Gloss Photo</b>                          | No  | No   | Not Tested                              | Yes   |
| HEWLETT-PACKARD DesignJet | 1050C/1055CM                          | Dye                | <b>High-Gloss Photo</b>                          | No  | No   | Not Tested                              | Yes   |
| HEWLETT-PACKARD DesignJet | 2000/2500/<br>2800/3000/<br>3500/3800 | Dye                | See Printing Notes                               | Yes   | Yes  | Not Tested                              | Yes   |
| HEWLETT-PACKARD DesignJet | 5000                                  | Dye                | See Printing Notes                               | No  | Yes  | Not Tested                              | Yes   |
| ENCAD NovaJet             | PROe                                  | GX                 | See Printing Notes                               | No  | Yes  | Not Tested                              | Yes   |
| ENCAD NovaJet             | 500                                   | GX                 | See Printing Notes                               | No  | Yes  | Not Tested                              | Yes   |
| ENCAD NovaJet             | 600/700 Series                        | GS+, GX            | See Printing Notes                               | No  | Yes  | Not Tested                              | Yes   |
| ENCAD NovaJet             | 850                                   | GS+, GX            | See Printing Notes                               | No  | Yes  | Not Tested                              | Yes   |
| ENCAD NovaJet             | 1000i                                 | Qi Dye             | See Printing Notes;<br>Printer Heater Setting: 6 | Yes   | Yes  | 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) |
| COLORSPAN DisplayMaker | Hi-Res 8                  | EC                | <b>Glossy Photobase</b>    | No  | Yes  | Not Tested                        | Yes  |
| COLORSPAN DisplayMaker | Esprit/Series XII         | EC                | See Printing Notes         | No  | Yes  | Not Tested                        | Yes  |
| MUTOH Falcon           | RJ-4100/<br>RJ-6100       | Dye               | See Printing Notes         | No  | No   | Not Tested                        | Yes  |
| EPSON Stylus Pro       | 7600/9600/<br>10000/10600 | Photographic Dye  | <b>Glossy Film</b>         | No  | Yes  | Not Tested                        | No   |

## 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

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 [www.encad.com/Support/RIP-Support/index.asp](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 directly from Encad, as well as complete descriptions and support, please visit the RIP company's website.

|                                   |  |
|-----------------------------------|--|
| 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>       |
| Best GmbH                         | <a href="http://www.bestcolor.com/bcint/index.htm">www.bestcolor.com/bcint/index.htm</a>                     |
| Scanvec Amiable                   | <a href="http://www.scanvecamiable.com">www.scanvecamiable.com</a>   |
| Onyx Graphics                     | <a href="http://www.onyxgfx.com">www.onyxgfx.com</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 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.

## Hewlett-Packard Printers

**Note:** These settings were determined using the respective HP DesignJet printer drivers with Adobe PhotoShop on a Windows NT 4.0 platform, and are intended to produce images of high quality with little user adjustment. These settings may vary using different applications and systems, but will still provide a good starting point. Leave other settings at the default state of the printer driver. You may want to experiment with other settings to customize results for needs and applications.

Other features, such as Postscript Options and Page Size setup, are user definable and will have no impact on final image quality, but should be examined and adjusted by the user.

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:

- 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

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.

## Hewlett-Packard DesignJet 5000PS3

Press the "media load/unload" button so the control panel will guide you through each step. Position the roll tightly against the fixed flange on the supply reel, making sure the media has no "telescoping." This may require a little more force than media on different cores. Feed the media through the printer, aligning it with the blue guideline, and pull enough media through to ensure the edges are square to the supply roll. Complete the remaining instructions as directed on the control panel.

As with other HP printers, be sure to allow print head alignment when switching media types for optimum image quality. If this is not automated, select it through **Setup**. Choose **Menu -> Utilities -> Calibrations -> Printhead Alignment**. When prompted for **Media Type**, select **Photo Imaging Gloss**.

On the printer:

- Select **Printer Setup**
- Select **Internal RIP Settings**
- Select **Black Replacement**
- Select **Off**

The default setting for Black Replacement varies depending on which version of firmware your printer has. Leaving the Black Replacement on will result in prints with a green cast.

There is also an Ink Emulation selection available in the Internal RIP Settings. The choices here will affect overall color balance and saturation. Experiment to find the selection that gives you the best results for your application.

When printing with the HP DesignJet 5000PS3 printer driver, make the following selections:

**Print**

**Setup**

- Select **Properties**

—Under the **Device Options** tab, select the desired **Print Quality** mode. **Max Quality** produces excellent images on this media.

- Click **OK** again to exit **Properties** and return to **Setup**

When Printing with the HP DesignJet 5000 printer driver, make the following selections:

**Print**

**Setup**

- Select **Properties**

—Under the **Basic Setup** tab, select the desired **Print Quality** mode. **Max Quality** produces excellent images on this media.

- Click **OK** again to exit **Properties** and return to **Setup**

### Hewlett-Packard DesignJet 3500 CP

Press the "media load/unload" button so the control panel will guide you through each step. Position the roll tightly against the fixed flange on the supply reel, making sure the media has no "telescoping." This may require a little more force than media on different cores. Feed the media through the printer, aligning it with the blue guideline, and pull enough media through to ensure the edges are square to the supply roll. Complete the remaining instructions as directed on the control panel.

As with other HP printers, be sure to allow print head alignment when switching media types for optimum image quality. If this is not automated, select it through **Image Quality -> Printhead Service -> Align Now**. When prompted for **Media Type**, select **Semi-Gloss Photo Paper**.

When Printing with the HP DesignJet 3500CP PS3 printer driver, make the following selections:

#### **Print**

#### **Setup**

—Select **Properties**

—Under the **Advanced** tab, select the desired **Print**

**Mode**. **Photographic Quality** produces excellent images on this media. For **Color Management**, select **EuroScale**. For **Rendering Intent**, select **Colorimetric**.

—Click **OK** again to exit **Properties** and return to **Setup**

When printing with the HP DesignJet 3500CP printer driver, make the following selections:

#### **Print**

#### **Setup**

—Select **Properties**

—Under the **Options** tab:

—Select **Semi-Gloss Photo** for paper type

—Select the desired **Quality** mode. **Photo** produces excellent images on this media. **Color** should be left at **Automatic**.

—Click **OK** again to exit **Properties** and return to **Setup**

### Hewlett-Packard DesignJet 1050CM

—Select **Print**

—Choose **Properties**

—Go to the **Options** tab

—Choose **High-Gloss Photo** for paper type

—Click **OK**

### Epson 9000 with Fiery RIP Station 5100

When printing with the Epson 9000 using the Fiery RIP Station 5100, use the following settings for best results:

Print Mode: **PQ Semi Gloss Paper**

Rendering Style: **Photographic**

CMYK Simulation: **DIC**

RGB Source: **Off**

Screen Method: **Error Diffusion**

The Fiery RIP Station 5100 provides many selections that allow the user to customize results for a variety of applications and media. The above results were selected to provide optimum image quality for general imaging applications using KODAK Premium Photographic Media. Image quality can be affected by choosing different resolutions, by selecting uni- or bi-directional printing, or by selecting different Screen Methods. Color quality can be affected by changing such things as CMYK simulation, RGB source, brightness and others. These choices should be tested by the customer, and chosen for specific applications and preferences.

### Epson Stylus Pro 9000

Make the following selections with the supplied Epson printer driver:

#### **Print**

#### **Setup**

—For **Media Type**, choose **Photo Quality Inkjet Paper**

—Select **Properties**. Under the **Main** tab select **Custom** and then **Advanced**.

—In **Color Management**, choose **Color Adjustment** and mode **PhotoRealistic**.

—Choose Print Quality of **Fine 720 dpi** or **Super Fine 1440 dpi** (there is little difference on this media).

—Click **OK**

—Click **OK** again to exit **Properties** and return to **Setup**

Now select **Transfer**

—Select **Override Printer's Default Functions**

—Deselect **All Same**

—Select **Black**

—Enter **90** in the **100%** field

These settings will produce excellent results in terms of color reproduction and image quality, while drying fast enough to use a take-up spool in most conditions (use caution when humidity is high). Using this path, you will only be able to print in uni-directional mode. To decrease print time and print in bi-directional mode, labeled high-speed in the Epson dialogue box, the media type needs to be Photo Paper, and all other settings the same as described above. While allowing faster printing, color saturation will be lower. Test for your applications.

### Epson 7600/9600/10000 Printers

Avoid using the take-up reel when printing at greater than 50% RH.

## Epson 7600/9600/10000 Series Photographic Dye Printers

For best color, use Media Selection: **Photo Quality Inkjet Paper**

Print at 720 or 1440 dpi for best results.

Select **Page Setup** and then choose **Transfer**.

—Select **Override Printer's Default Functions**

—Deselect **All Same**

—Select **Black**

—Enter **90** in the **100%** field.

Use caution when using the take up reel at high humidity.

Prints must be laminated for optimum performance.

## 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

Please refer to lamination chart in compatibility sections above for specific printer/ink/laminate recommendations.

#### Lamination Class Definitions

|  |  |
|--|--|
| <b>Heat Activated Thermal, 210-240°F (99-116°C) *</b>        | Laminates with a '0.5/2.5' mil polyester/adhesive ratio for hot roll laminators at 210 - 240°F, and '1/2' mil inkjet compatible hot shoe laminator films.                              |
| <b>Heat Activated Low Temperature, 185-195°F (85-91°C) *</b> | Several '1/2' mil polyester/adhesive ratio for hot roll laminators at 185 - 195°F.   |
| <b>Heat Assisted, 185-195°F (85-91°C)</b>                    | Laminates with pressure sensitive adhesives, specially formulated for inkjet prints to be applied on hot roll laminators at 185 - 195°F. They can use either vinyl or polyester films. |
| <b>Pressure Sensitive, Ambient to 120°F (49°C)</b>           | Cold applied liquid laminate adhesives on either vinyl or polyester films.   |

\* For both Thermal and Low Temperature, we recommend the 3 mil laminates mentioned. Thicker laminates may be applied to the back of the print for increased total thickness.

It is important that your print be dry before laminating. For best results, use inkjet-specific laminate products.

For increased durability, choose a laminate with UV protection and encapsulate with a 1/4-1/2" (6.5-13 mm) seal around the edges of a print to prevent moisture and other airborne pollutants from reaching the image. Heavier weight papers may require a wider edge seal.

### 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.

## PERFORMANCE GUARANTEE

### Indoor Performance Guarantee

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](http://www.encad.com).

| Manufacturer              | Model                     | Ink                         | Durability                     |
|---------------------------|---------------------------|-----------------------------|--------------------------------|
| KODAK PROFESSIONAL        | 3043/3062                 | 6 Color Dye                 | 5 years                        |
| HEWLETT-PACKARD DesignJet | 5000 Series               | 6 Color Dye                 | 7 years<br>10 years laminated  |
| HEWLETT-PACKARD DesignJet | 2xxx/3xxx                 | 4 Color Dye                 | 7 years<br>10 years laminated  |
| ENCAD NovaJet             | 800, 700, 600, 500 Series | 4/8 Color GS+               | 2 years                        |
|                           |                           | 4/8 Color GX                | 25 years<br>35 years laminated |
|                           | 1000i                     | Qi Dye                      | 20 years                       |
| EPSON Stylus Pro          | 7600/9600/10000/10600     | 6 Color<br>Photographic Dye | 15 years<br>10 years 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 Lightfast Plus Dye | Encad GX                      |
| Colorspan EC Dye         | Encad GX                      |
| Roland Dye               | Epson 9000 Dye                |
| Mutoh Dye                | Epson 9000 Dye                |

# KODAK Premium White Film / 5 mil

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## ORDERING INFORMATION

### KODAK Premium White Film / 5 mil

| Roll Length                  | Roll Width / Order No. |                     |                      |                    |                      |
|------------------------------|------------------------|---------------------|----------------------|--------------------|----------------------|
|                              | 24 in.<br>(61 cm)      | 36 in.<br>(91.4 cm) | 42 in.<br>(106.7 cm) | 50 in.<br>(127 cm) | 60 in.<br>(152.4 cm) |
| 100 ft<br>(30.5 m)           | NA                     | 850 0456            | 191 8440             | 883 6843           | 156 8443             |
| 16.4 ft<br>(5 m)<br>(sample) | NA                     | 858 5788            | NA                   | NA                 | NA                   |

NA = Not available

## PHYSICAL CHARACTERISTICS

| Physical Characteristics       | Value   | Test Method Reference |
|--------------------------------|---|-----------------------|
| Caliper                        | 5 mil (127 $\mu$ m)                                 | ISO 534               |
| Opacity                        | >95   | Tappi T 524           |
| CIE Whiteness                  | 134   | Tappi T 524           |
| Weight                         | 195 g/sm  | ISO 536               |
| Brightness                     | 110   | Tappi T 524           |
| 60-degree Gloss                | >80   | ISO 7668              |
| L*(D65/10 uvi/BBW)             | 98  | Tappi T 524           |
| Flame Spread Classification    | Class A   | ASTM E84              |
| Operating Conditions           | 59-86°F (15-30°C),<br>20-70% RH<br>(non-condensing) |                       |
| Recommended Storage Conditions | 68°F (20°C),<br>50% RH                              |                       |

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

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