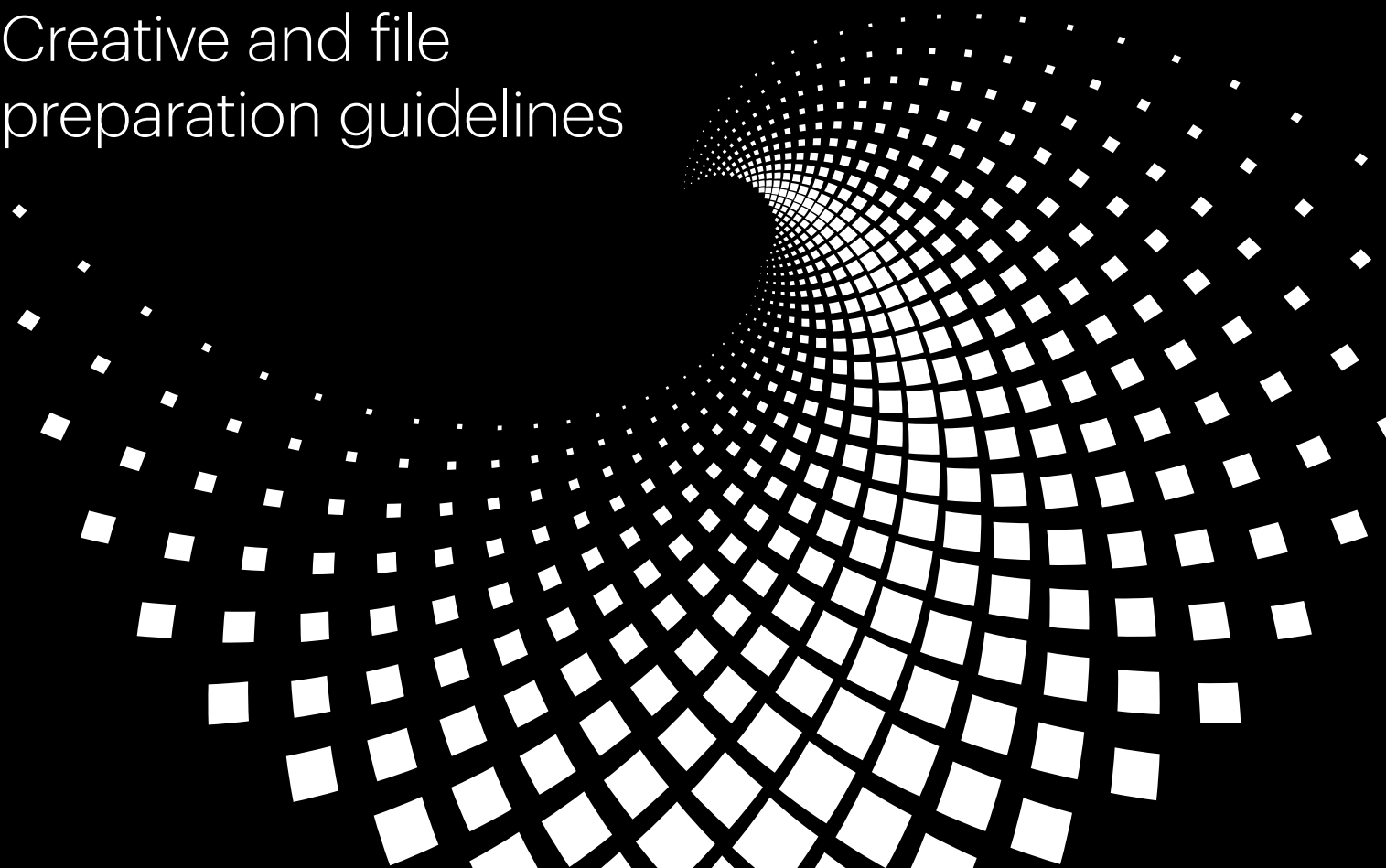


KODAK NEXPRESS

OPAQUE WHITE DRY INK

Creative and file preparation guidelines



Expand your options

Kodak NexPress Opaque
White Dry Ink opens the
door to new applications
printing on transparent or
colored media.

The ability to add white ink into a design offers both practical and creative benefits. White ink improves image quality on transparent label and cling media. It also boosts design uniqueness when incorporated into jobs printing on colored substrates.

This design guide covers:

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Working closely with your print service provider is critically important in achieving great end results with opaque white ink. Be sure to have a conversation about the substrates you want to print on, and the types of options that can be employed to apply the ink for optimum impact.

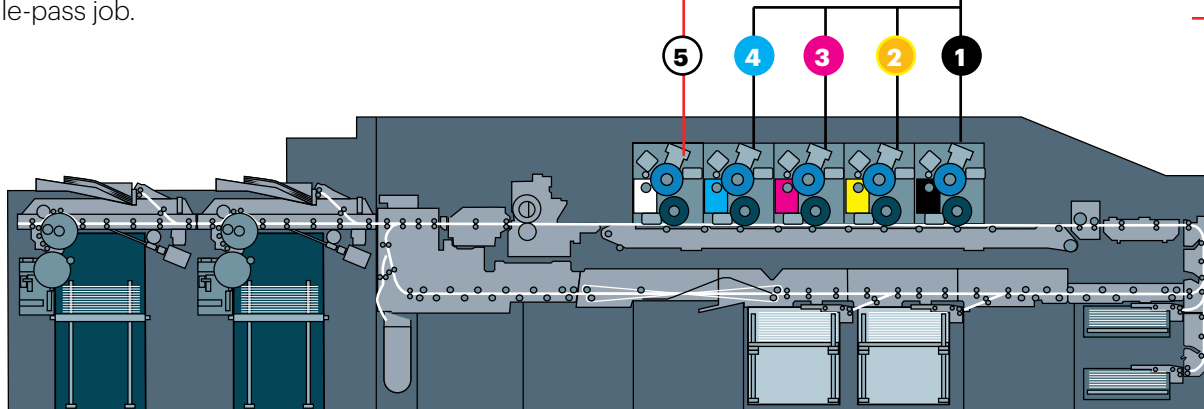
How opaque white ink works

It's laid down last, not first. This laydown order is different than what you may be accustomed to with offset printing.

Fifth Imaging Unit

Opaque white dry ink is loaded in the Fifth Imaging Unit on the press, which means it is applied last, after C, M, Y and K ink have already been laid down. It can be printed on the back side of transparent media or as an overprint, but it **can't be printed underneath process color inks** in a single-pass job.

Process color ink units



Always request a proof, to make sure that printed results are meeting your expectations.

How to use opaque white ink

It's very easy to incorporate opaque white using one of two workflows.

WORKFLOW

1

OR

WORKFLOW

2

Don't do anything special; create a normal CMYK or RGB file without a special spot color for opaque white

When would you use this workflow?

If you want the press operator to apply opaque white using one of three job ticket options available within **Kodak NexPress** Digital Front End Software:

- Flood Coat
- Image Coat
- Auto White Blend

These options are explained in more detail on pages 3-7 of this guide.

Define a spot color for opaque white during file creation or during prepress

When would you use this workflow?

If you are printing on a dark-colored substrate, a spot layer for opaque white is necessary in order to obtain a pure, clean white at maximum density.

Creating a spot plate is also a good idea if you want to print white in designated areas, or generally want more control over how white will appear as a color within your design.



Job ticket options

NexPress Press operators can apply opaque white ink automatically, using one of three overcoat options during job set-up in the job ticket. We'll explain each one in detail, but here's a thumbnail view.

OPTION

1

OR

OPTION

2

OR

OPTION

3

Flood coat

This option creates a flood coat of opaque white over the entire imageable area of the job on the back side of the media.

When would this option be used?

To improve image quality and color saturation on transparent substrates.

Image coat

This option prints opaque white ink last over any CMYK dot in the image area, effectively coating the areas of the job that are associated with an object, or over elements—including live text—that are specified to print as a color.

When would this option be used?

To improve legibility of white elements on transparent media where the substrate itself needs to remain clear everywhere except image areas.

Auto white blend

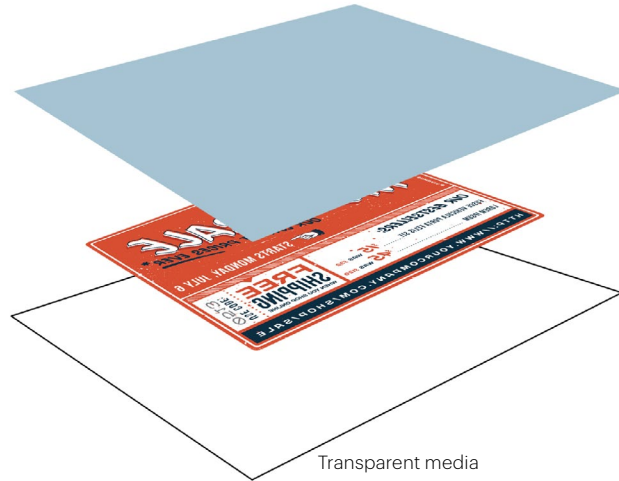
This option mixes opaque white with CMYK inks to simulate the color expected if the substrate was white. It gives the color-matched perception of white ink being applied under CMYK inks, even though it is actually being applied around and/or on top of—and blended with—process inks in the Fifth Station.

When would this option be used?

This option is ideal for printing clean whites on light-colored substrates, and can also be used to improve white density on transparent substrates.

Flood coat—no file prep required

FLOOD COAT lays down a layer of opaque white ink at 100% density over the entire imageable area of the job.



Opaque white ink is applied over the entire image area on the back side of the media.



FLOOD COAT boosts image quality in designs that feature full-bleed images on transparent media:

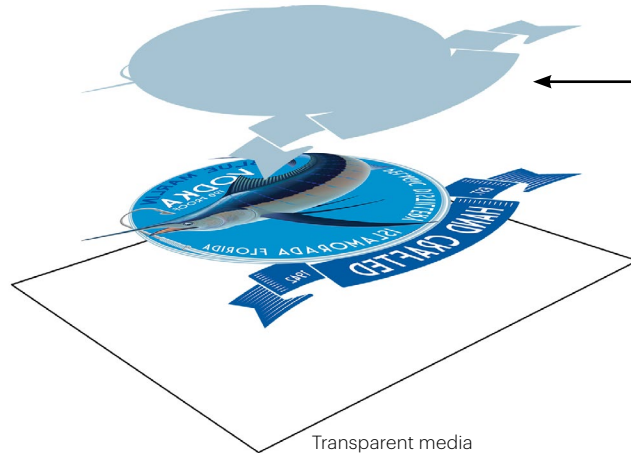
- Signage

Image coat—no file prep required

IMAGE COAT lays down a layer of white ink at 100% density in the areas of the layout that are:

- associated with an object
- are specified to carry a color, including white; opaque white will also be applied to live text, as long as it is spec'd as a color

No other areas will be coated with opaque white dry ink.



Opaque white ink is applied over the area that is associated with an image object on the back side of the media.



IMAGE COAT boosts image quality in designs for transparent media that don't use the entire sheet, but only designated areas:

- Custom labels (not pre-adhesive)
- Stickers and decals printed on cling stock
- Shrink sleeves
- Transparent signage

Auto white blend—no file prep required

AUTO WHITE BLEND helps mask the color of light-colored substrates to create true white.

It can be used to boost vibrancy and “pop” in vector graphics, and to print grayscale photographic images on light-colored substrates.

Auto White Blend also drives benefits for jobs printing on transparent media:

- it can be used as an ink savings option; it will not lay down ink in high-density areas that do not need it
- it can be used for an image or graphic only—but not for copy—to create a pleasing mirror image from both sides (front and back).



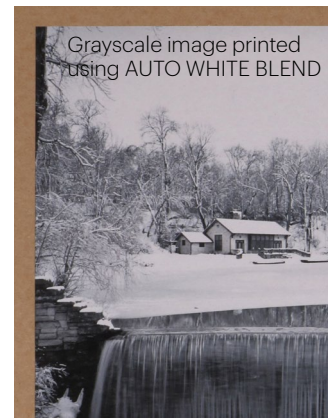
← Opaque white ink is applied on top of CMYK areas, blending with the process inks below in a way that simulates true white. This option automatically applies more white in light areas of the original image, and less (or none) in darker areas.



By definition, the Auto White Blend option restricts white ink laydown to somewhat less than 100%. If you want white elements to print at a maximum density of 100%, you'll need to create a spot plate (see pg. 8).

Auto White Blend will enable the appearance of true white in low- and no-ink areas, but does not really impact color in high-density ink areas. Particularly with dark-colored substrates, brand colors and critical CMYK images will not reproduce as though the opaque white was printed first.

Also, you should know that Auto White Blend overrides spot color settings. If you spec text and graphic elements to print in a fifth color named “NexPress DryInk opaque white” and the job prints using auto white blend, the press won’t recognize the spot plate. Instead, it will automatically blend opaque white ink with whatever reference color you used.



Always request a proof!



AUTO WHITE BLEND enables printing of true white on transparent media and light-colored stocks:

- Static clings
- Point-of-sale
- Greeting cards & invitations
- Small-format packaging
- Custom labels

Defining a spot color

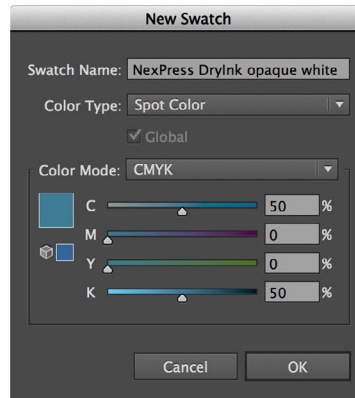
If you are printing on a dark-colored substrate, are looking for maximum white density, or generally want to control how and where opaque white dry ink is applied, you'll need to create a spot plate.



Here's how a piece printed with opaque white defined as a spot color looks when printed.

TECHNIQUE 1 Opaque white in vector artwork

1. Open or create a new file in **Adobe Illustrator**
2. Create a new spot color swatch
 - a. Name the swatch "NexPress DryInk opaque white"
 - b. Designate it as "Spot"
 - c. Set the color to CMYK: 50 | 0 | 0 | 50
4. Change the objects' fill (and/or outlines) or text color to the new "NexPress DryInk opaque white"
5. Save your file as "myFileName_White.eps" and place in your final layout.



3. Select any vector objects and/or type elements that you want to print in opaque white ink.



Here's how the file displays on a monitor.

TECHNIQUE

2 Opaque white in raster artwork

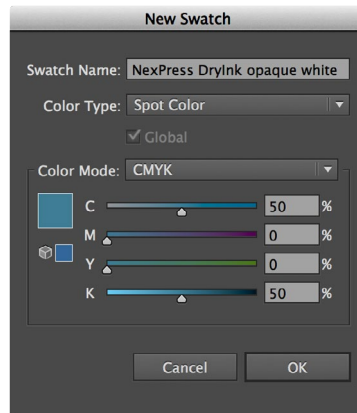
1. Open a file **Adobe Photoshop** and create a mask to isolate the parts of the image that need to print with opaque white.
2. Change Image Mode to duotone, then to monotone.
 - a. Name the monotone color "NexPress DryInk opaque white"
 - b. Set the color to CMYK: 50 | 0 | 0 | 50
3. Save your file as "myFileName_White.psd" and place in your final layout.



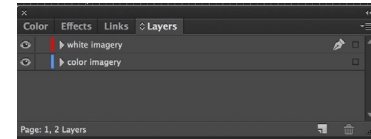
If you intend to use opaque white ink with raster images, have your print provider run a test on your production substrate using AUTO WHITE BLEND first. If the results are satisfactory, you won't have to spend time creating a spot plate.

Assembling your layout in Adobe InDesign Software

1. Open or create a new file
2. Create a new spot color swatch
 - a. Name the swatch "NexPress DryInk opaque white"
 - b. Designate it as "Spot"
 - c. Set the color to CMYK:
50 | 0 | 0 | 50



3. Create a new layer for all white elements above the base art.

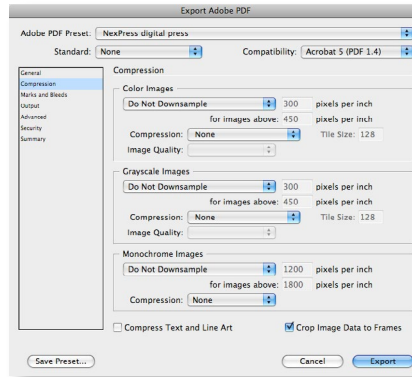


Place imported elements that will print in opaque white on this layer, as well as InDesign objects and/or type that will print in opaque white.

4. Select any InDesign objects and/or type elements that you want to print in opaque white ink, and change the fill and/or text color to the new "NexPress DryInk opaque white".
5. Save your file as "myFileName_White.indd"

Exporting and checking PDFs when opaque white is used as a spot color

Make sure that the layer with white elements is visible when exporting to PDF. Save your file, then export to PDF using the settings below:



Note: Do not create a PDF using the “File/Print” command to either “Adobe PDF” or to “PostScript”. That will flatten your file and eliminate your transparent layers.

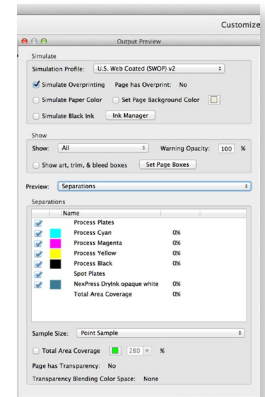
- Go to File /Adobe PDF Presets/High Quality Print
- Modify the Compression settings so that all text and imagery is uncompressed:

Ask your print provider if they prefer additional settings when creating a high quality PDF for their **NexPress** Press.

CHECKING YOUR WORK

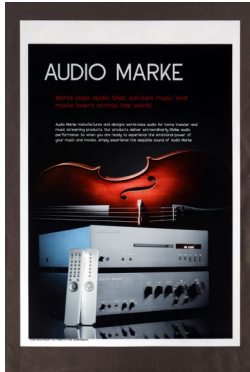
To check that you have successfully prepared your document for printing with opaque white dry ink as a spot color:

- Open the high resolution PDF file with Acrobat Professional Software
- Go to: Advanced/Print Production/Output preview. The dialog box will look like this.
- Mouse over the areas where you expect to have opaque white ink.
 - If you have set up the file correctly, the percentage of “NexPress DryInk opaque white” will change (100% being the highest possible value).



There may be more than one way to achieve the effect you want

Static cling printed with
AUTO WHITE BLEND



Static cling printed with
FLOOD COAT



We'd recommend having a conversation with your service provider about the effect you are trying to achieve. The press operator can then make an informed decision about which digital front end option will yield the best results for your particular application.

ALWAYS REQUEST A PROOF!

Printed results can vary depending on your choice of substrate, the way in which files are prepared, and the job ticket option selected during production. Seeing a proof can eliminate unwanted surprises and help ensure that the final result meets your expectations!

Frequently asked questions

Kodak NexPress Digital Production Color Presses typically print four process colors—CMYK. In addition, a fifth imaging unit can print a variety of other **NexPress** Dry Inks inline. This gives designers the ability to add unique watermarks and protective coatings, or provide extra security and authentication marks, match special colors, or add dimensional coating.

When using opaque white as a spot color, why must the color swatch be named “NexPress DryInk opaque white”?

The exact name, including capital letters, is very important. That swatch name is recognized by the **NexPress** Press, which then assigns opaque white dry ink to the correct layers and sets other important press parameters. The press also alerts the operator if opaque white dry ink is not in the fifth imaging unit when needed.

Could another “reference color” be used instead of blue?

Yes, we used CMYK: 50 | 0 | 0 | 50 because it’s rarely used, and it’s transparent enough to see through on a monitor. Whatever color you choose, be consistent! Use the identical color in all **Illustrator**, **Photoshop** and **InDesign** files to avoid multiple reference colors coming into your production file when you assemble the job.

Also, be aware, that if opaque white is specified as a spot color within your file, but your project ends up printing using Auto White Blend instead, the reference color will actually print.

Can I print variable data with opaque white dry ink?

Yes, you can print variable data with opaque white dry ink. However, your variable data composition software must be compatible with the Fifth Imaging Unit capability of the **NexPress** Press.

Check with your print provider to determine if their VDP solution can support variable data in the fifth color.

Are pages with opaque white dry ink recyclable?

Yes. Unlike some other thermographic processes, pages printed with **Kodak NexPress** Dry Inks, including opaque white, are easily recycled as long as the substrate being used is also recyclable.

Can common substrates be used?

Yes, but opaque white dry ink is especially well-suited for colored substrates and transparent media, such as window clings or flexible films for packaging.

Can opaque white dry ink be laminated or UV coated?

NexPress Opaque White Dry Ink can easily be UV- coated or laminated by using lamination processes that are digital print-friendly. (Materials printed with opaque white cannot be used with the **Kodak NexPress** Glossing Unit, however.)

Can other software programs create files that use opaque white?

Yes, but if you need to create a spot plate for opaque white, your program must allow you to assign a spot color named "NexPress DryInk opaque white." If this is not an option, your print provider can also create an appropriately named spot plate in the **NexPress** Digital Front End Software.

Can the Digital Front End use an existing documented spot color to print white?

Yes. It just needs to be properly named (NexPress DryInk opaque white).

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