

# Layering White & Clear Ink Idea Book



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# What do you get when you layer white & clear ink?

## Brilliant graphics. Stunning capabilities. Awesome profits.

### Get the idea?

It's amazing how colorful your thinking can get when you start layering white and clear ink. For all kinds of great ideas using your EFI™ VUTEK® printer, just start turning the pages of this e-book. Then turn over a new leaf when it comes to your own capabilities.



**Overview: White & Clear –anything but bland!**

### White & Clear Ideas:

- White Flood: Pre/Post Coat
- Shape White: Pre/Post Coat
- Spot White Printing
- **Advanced Applications:**
  - Day/Night Backlit Print
  - Selective Spot Color Bumps
  - Enhanced Day/Night Print
  - Dual Day/Night Print
  - Max Color Backlit Print
  - Texture Printing

Overview: White & Clear  
anything but bland!

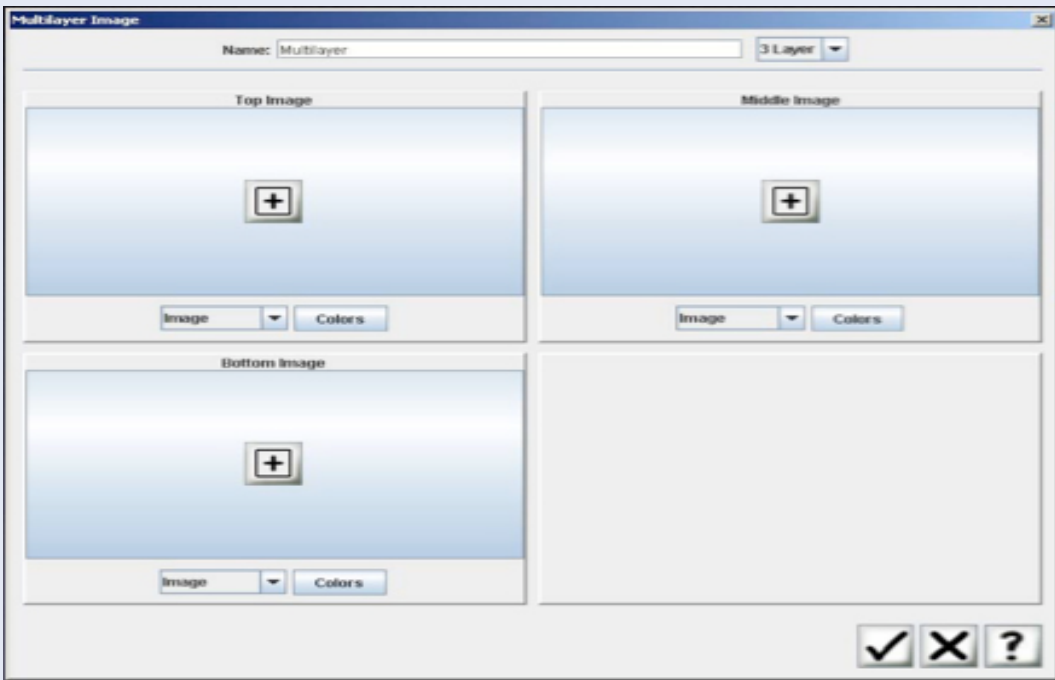
# White Ink Printing

## 3-Layer Printing

Enables you to place and print up to three independent layers of data, in perfect registration.

- File selection & layering control is designated at the printer workstation.
- Each layer can contain both CMYK and white data.

## MultiLayer Interface



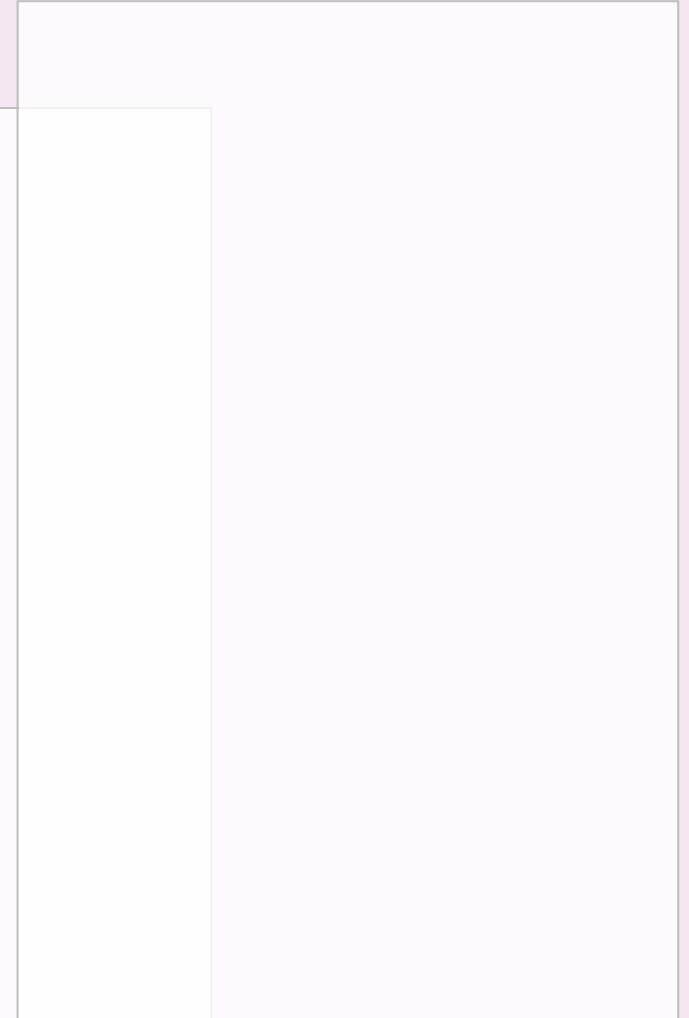
## White Applications

Flood White	Shape White	Spot White	Advanced White Applications
Pre-coat white, post-coat white	Prints under or over CMYK	Prints inline with CMYK	Most are 3-layer applications
Selected at the printer by the operator	Pre-press required, under or over selected at the printer by the operator	Pre-press required, white prints with CMYK. Single layer images print at the same speed	Pre-press required, white prints on multiple layers

# White Flood: Pre/Post Coat

1 or 2 layers of white can be used as needed for opacity when printing on colored substrates.

For clear substrates (second surface printing) white ink acts as a backer.





## Shape White Printing: Pre/Post Coat

Frosted glass:  
C=5, M=3, Y=3, K=2



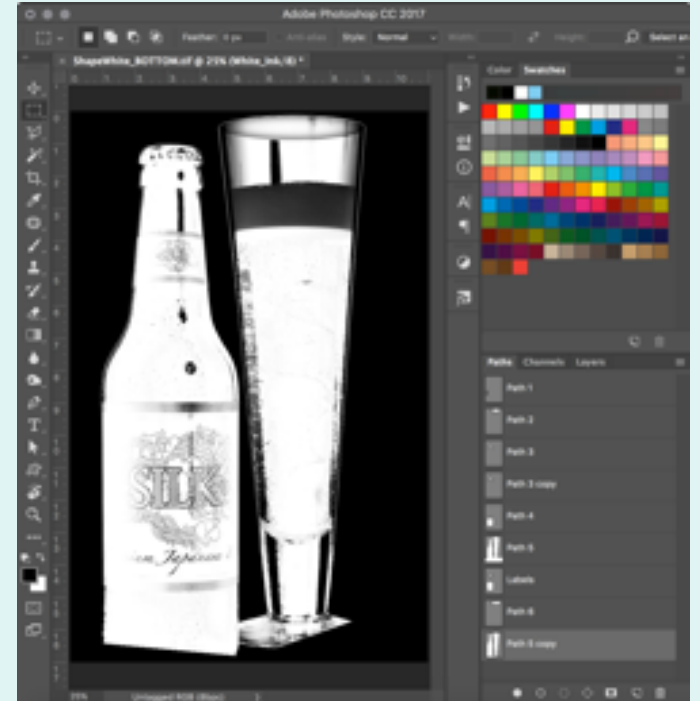
**When printed on a clear substrate,** "white" areas are clear, CMYK areas that do not contain white ink will appear frosted. Clear-coated areas will be translucent.



**When printed on a colored or metallic substrate,** "white" or light areas that do not contain white ink will show the substrate.



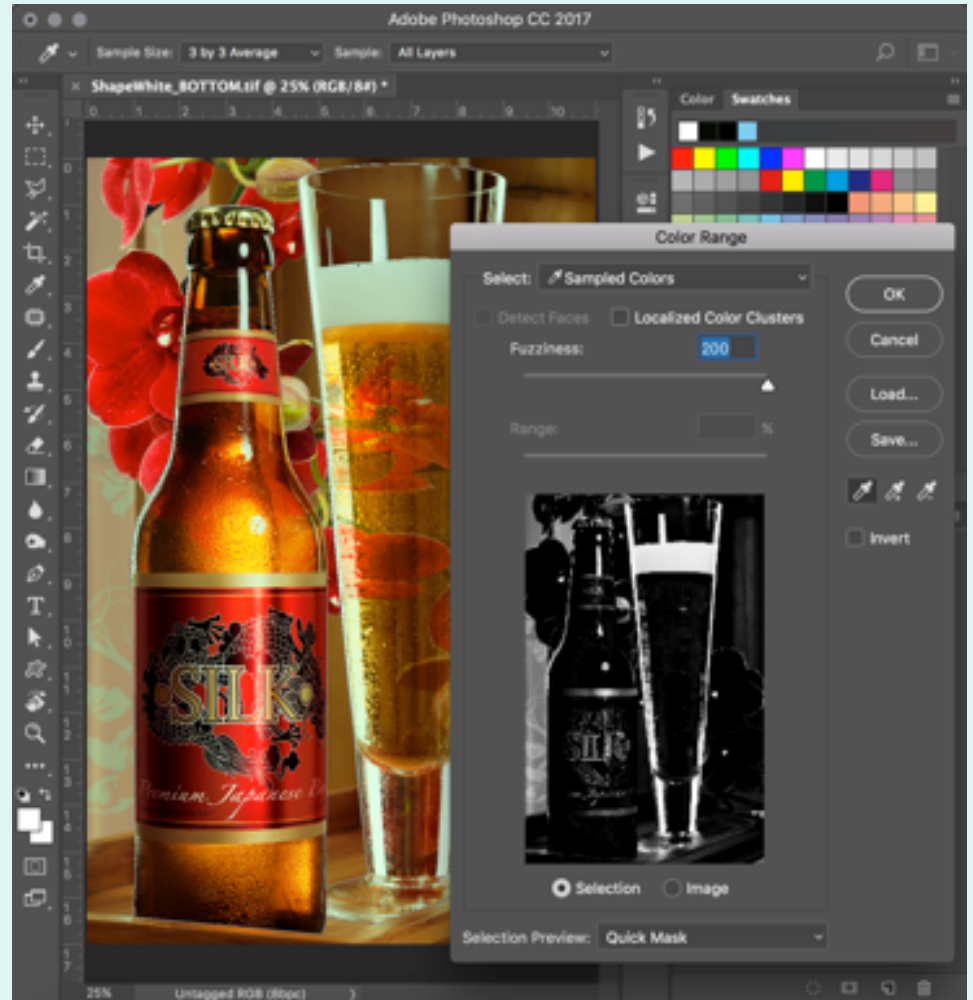
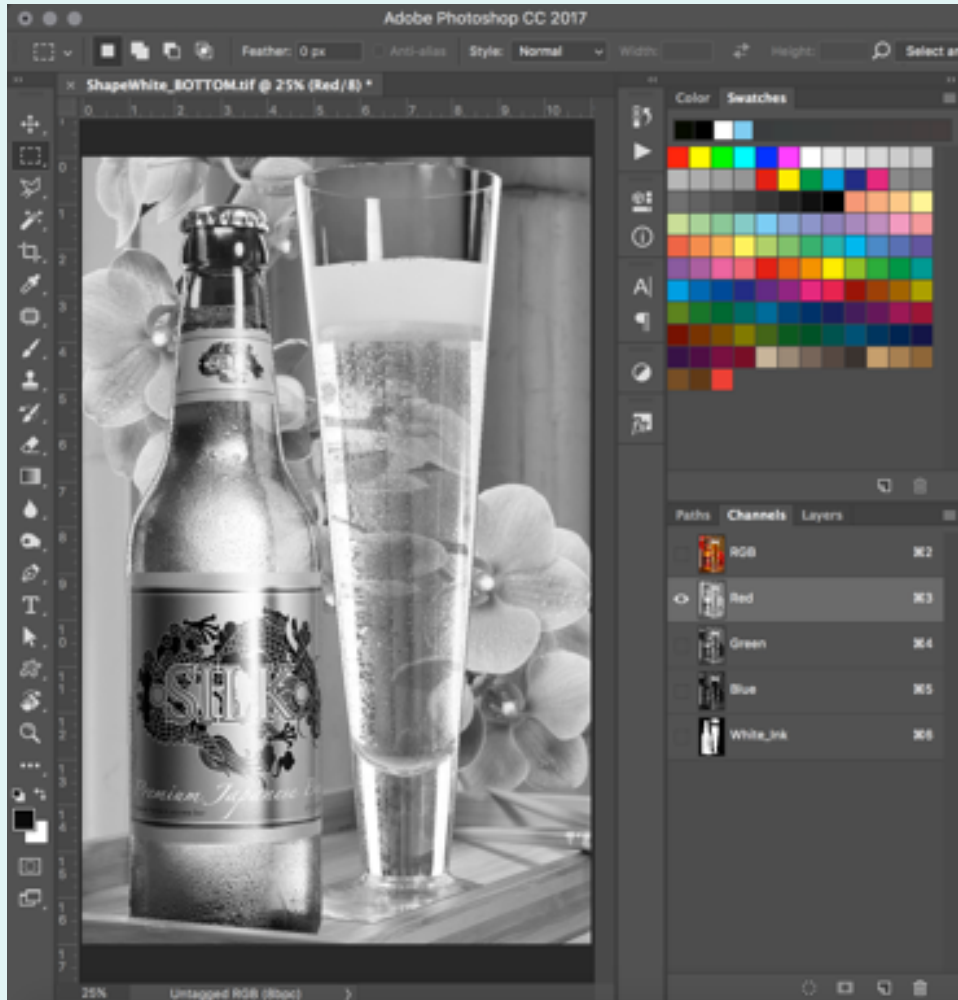
## Shape White Printing: Pre/Post Coat



The image is printed as a two-layer print.



## Shape White Printing: Pre/Post Coat



**Photoshop Tip:** Two ways to create white ink channels. **Left.** Copying the data out of a particular channel. **Right.** Using the Color Range tool.



## Shape White Printing: Clear



命恩愛生智清想和平安  
英皇青神手具花福月

2-layer print with spot varnish.

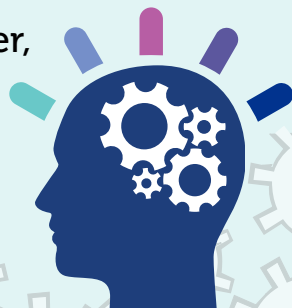


## Shape White Printing: Clear



命恩愛星智清想和平安  
英皇青神手美花福月

3-layer print with white-under, color and clear on top.





# Spot White Printing

- White ink areas are knocked out of CMYK areas, so all printing is done on one layer.
- White ink prints simultaneously with CMYK data.
- All-white files can be created and printed as a single layer or multilayer.
- **Big advantage:** Single layer files with spot white or all-white files print at the same speed as a single layer CMYK file.





## Spot White Printing

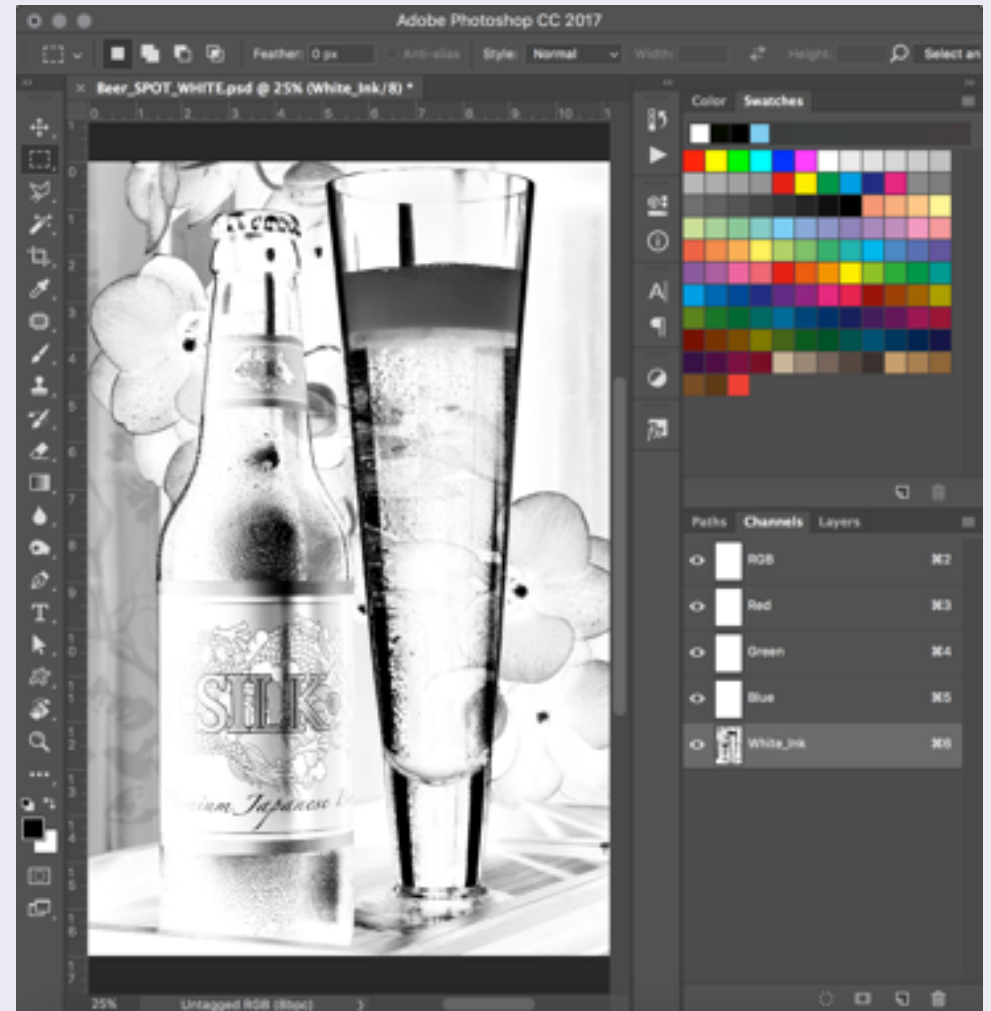
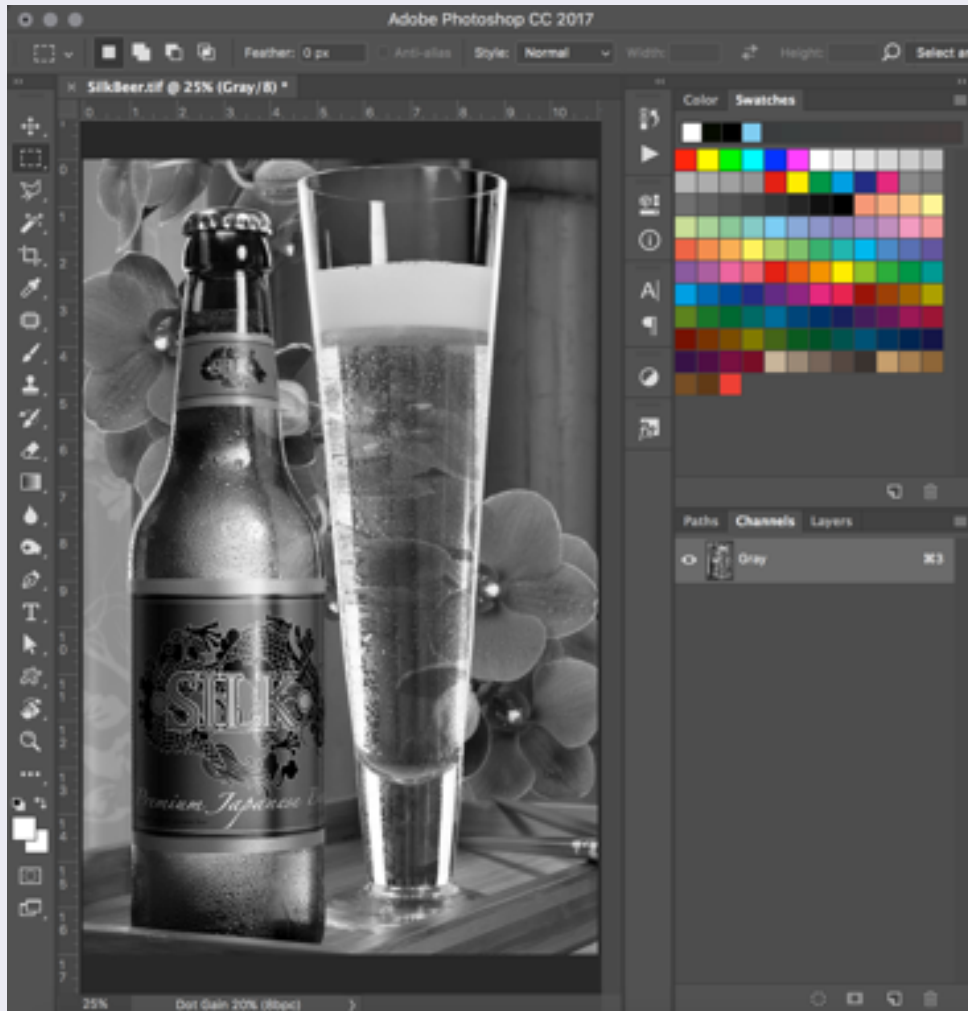


- White ink is jetted at the same drop size as the CMYK inks for sharp detail.
- Image is printed as a single-layer print.
- **Fact:** EFI has the “whitest white” in the industry!



**Production Notes:** These all-white ink images were printed on black polycarb material.

# Spot White Printing



**Photoshop Tip:** For great results, invert the black & white image and copy it into a white ink channel.

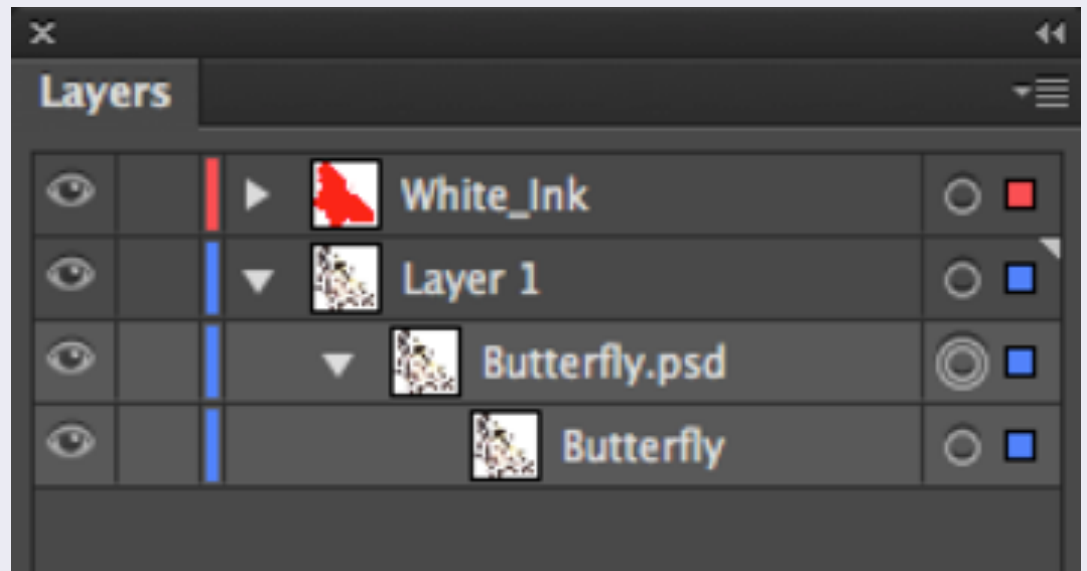
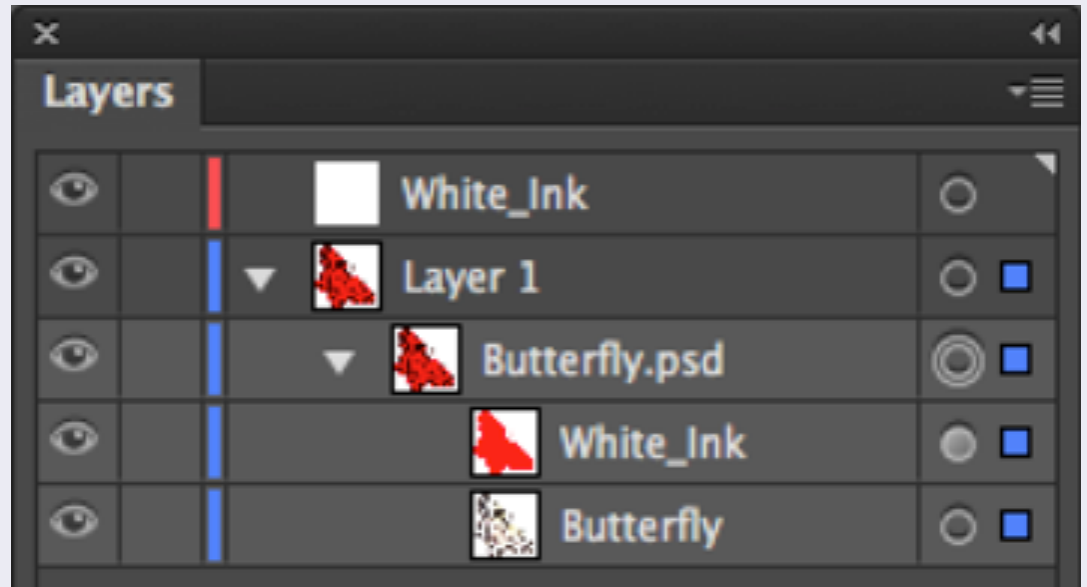


## Spot White Printing



### How to import a PSD file into Illustrator?

Embed the PSD and it separates out the white ink channel.





# Day/Night Backlit

- 3 layers: CMYK, white ink, CMYK.
- Used for backlit signs that are viewed in both daylight (unlit) and nighttime (lit).
- Second layer of CMYK adds color density.
- Same image top and bottom.
- Designated at the printer by the operator, using any CMYK file. No prepress required.
- **Prints in perfect inline registration!**



## Day/Night Backlit



The middle layer of white ink separates the two images for daytime viewing.

When lit, it acts like a diffuser and the back image adds color density.





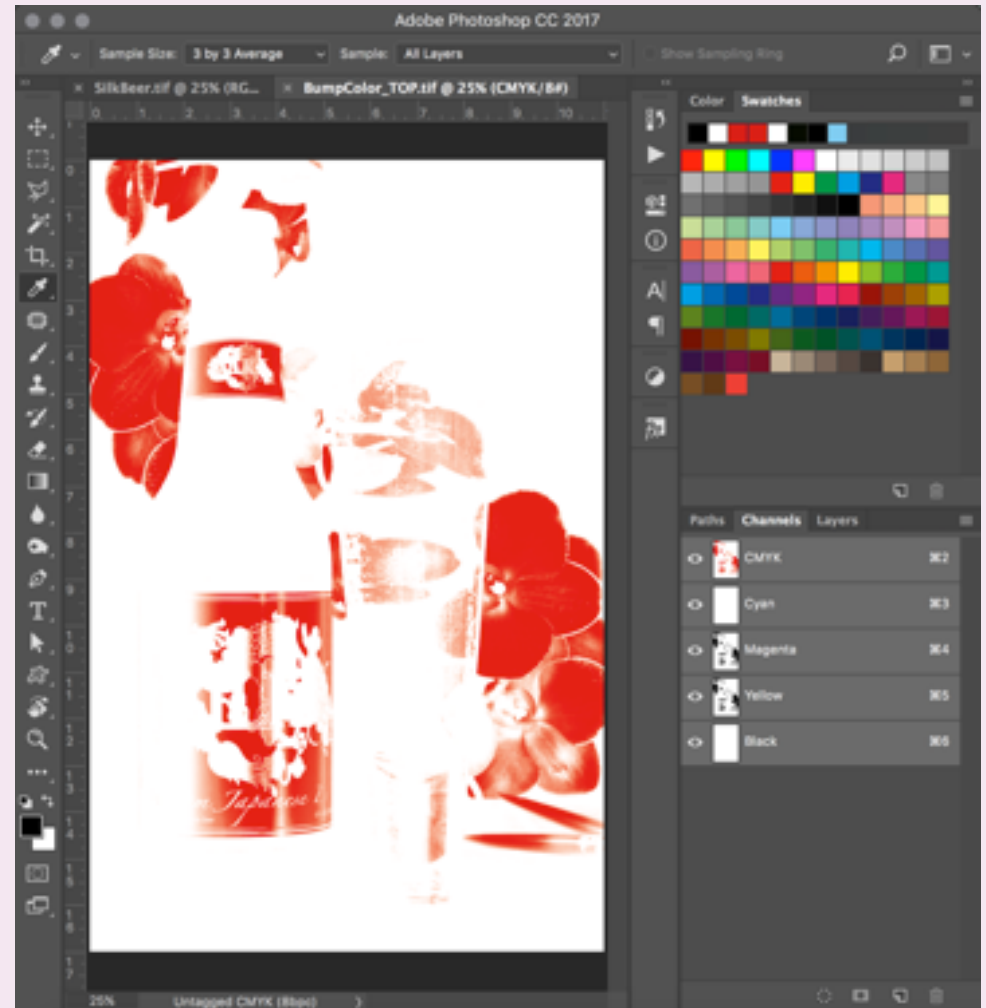
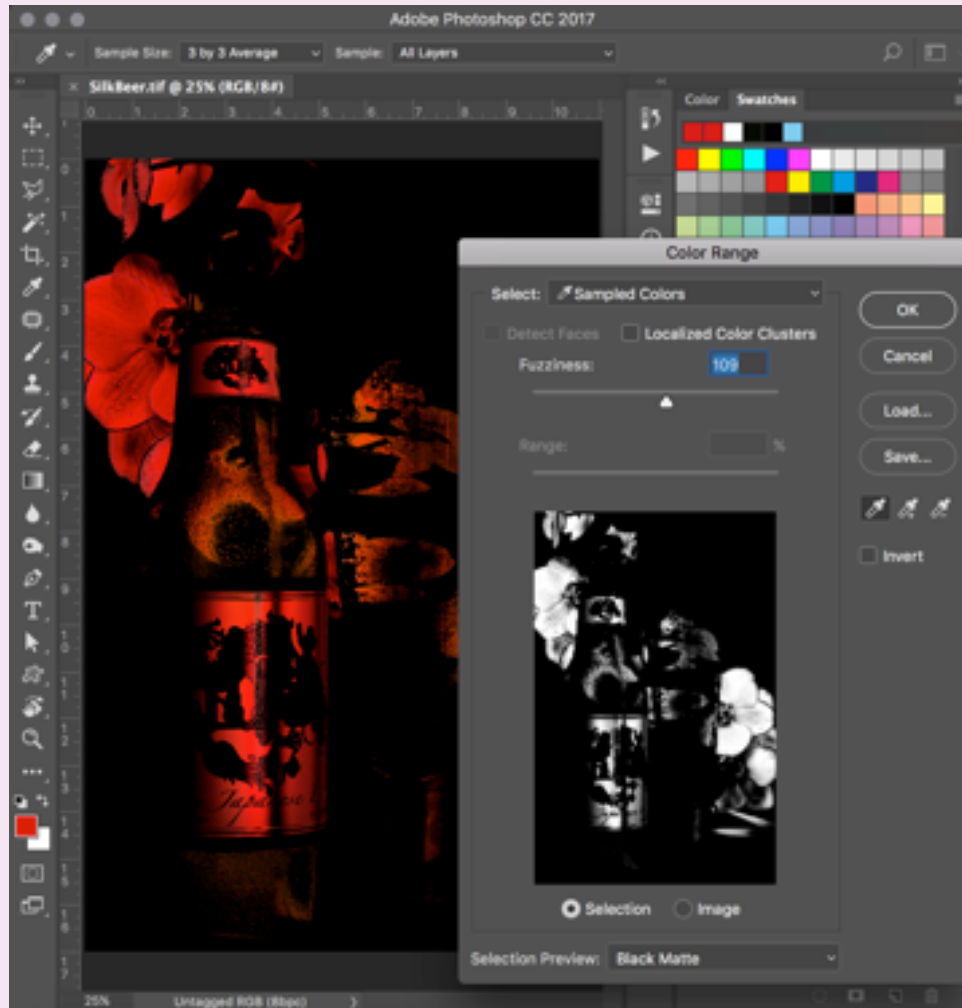
# Spot Color Bump: 2-Layer

- Selectively “double-hits” an area with a second layer of color.
- Use to add density to spot colors.
- Requires pre-press to build bump file.





# Spot Color Bump: 2-Layer



**Photoshop Tip:** Use the Color Range tool to easily select the color you want to bump.

## Enhanced Day/Night Backlit Print



- Selectively enhances areas of an image for more impact.
- Utilizes white ink on one or more layers.
- **Requires pre-press:**  
3 separate files are built, RIP'd and plugged into the multilayer interface.



## Enhanced Day/Night Backlit Print



First image against the clear material is the original CMYK or RGB file.

The image prints in CMYK and no enhancements have been made to the original image.



Second image is a file with a spot white channel.

The black area is a rich 4-color black build. The color areas create a 2-layer spot color bump for more impact.



Third image is a file with a spot white channel.

This image adds another layer of density, a third layer of rich black and the white ink "diffuser" for the color bump areas.



## Dual Day/Night Backlit Print



- A version of the day/night print, the nighttime backlit image alters the appearance of the front image.
- The middle layer of white ink separates the two images for daytime viewing.
- When lit, it acts like a diffuser and the back image adds color density.



## Maximum Color Backlit Print



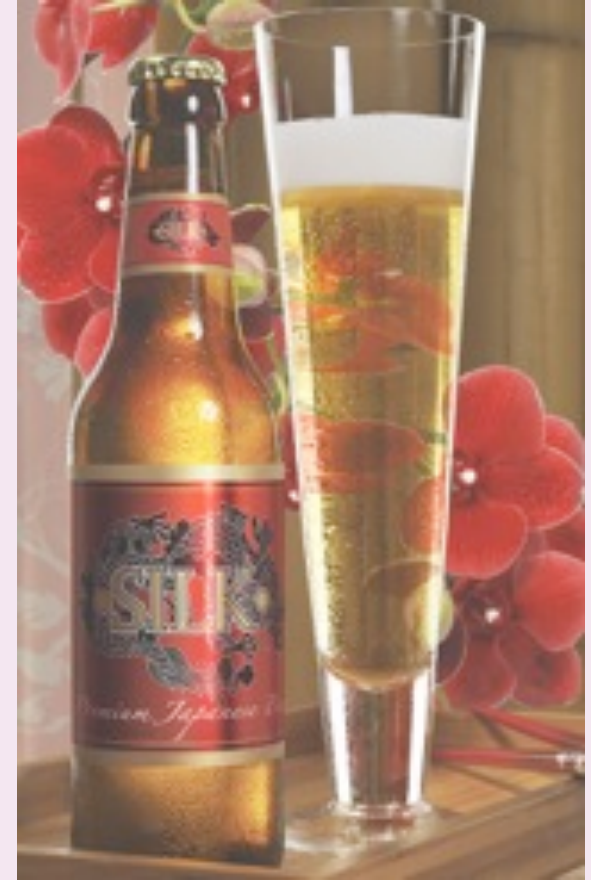
First image against the clear material is the original CMYK or RGB file.

No enhancements have been made to the original image.



Second image is a CMYK file with a spot white channel.

The spot white channel that fills in the image works similarly to the white in a day/night backlit.



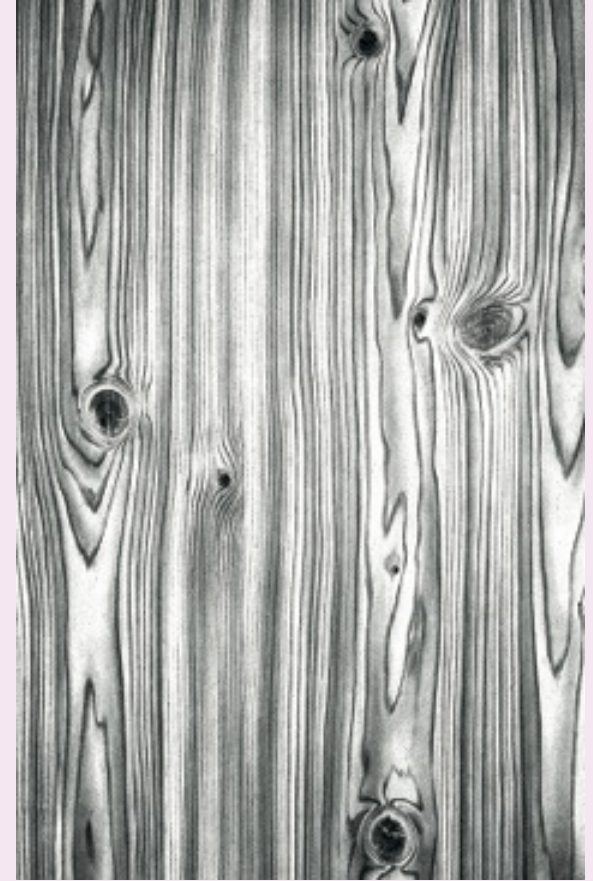
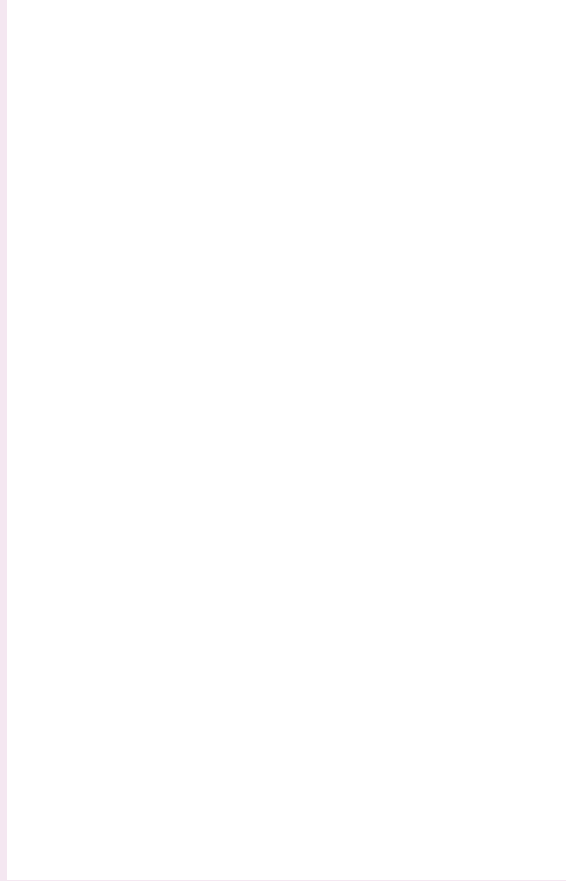
Third image is a CMYK file with a spot white channel.

This image adds a 3rd layer of color density. A 100% white ink channel prints with the CMYK data, creating an opaque diffuser.





# Texture Printing



The goal is to create a high contrast rich black image for the texture layer (woodgrain image). The image is copied into a white ink channel to add as much ink as possible. The middle layer is a white flood, and the image prints on top. You can run prints through more than once, depending on how much texture is desired. Other textures include leather, patterns and brush strokes for fine art prints.





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