# FIERY XF 5.0 - COLOR EDITOR

Introduction to the new Color Editor

Compared to previous versions, spot color management in Fiery XF 5.0 provides substantial benefits with regard to overprinting in conjunction with the printing of spot colors.

You can now make settings, that could previously only be made by manually editing the system or workflow tickets, directly in Color Editor. This makes it possible to make adjustments that correspond more exactly to the actual print conditions.

The new user interface
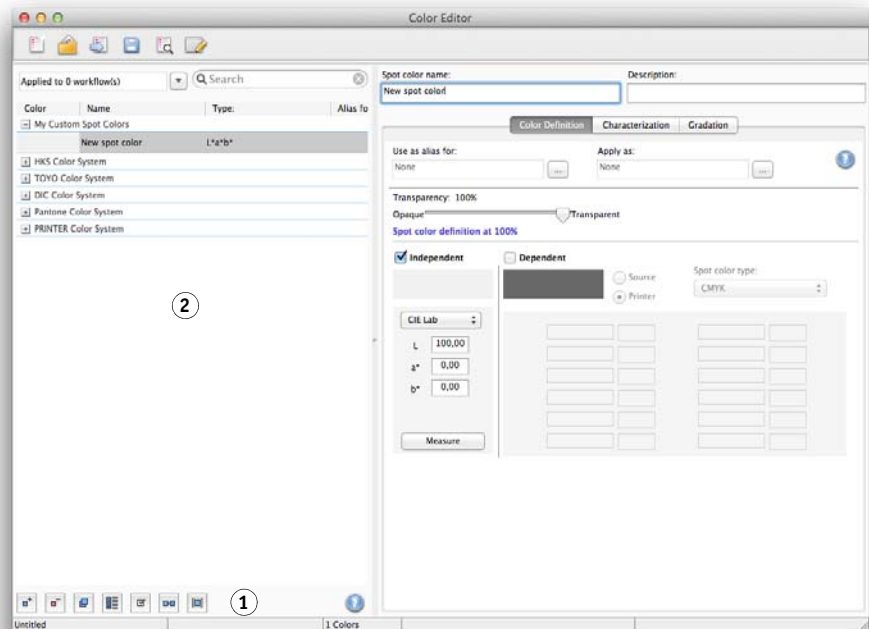
The user interface has been redesigned for version 5.0. It now provides new options and functions to make working with spot colors easier.

A new toolbar (1) at the bottom of the window provides quick access to the important features explained below:

- Plus (+) button

  Add a new spot color.

- Minus (-) button

  Delete a selected spot color.

- Duplicate button

  Create a copy of a selected spot color. You can duplicate custom spot colors or spot colors from the internal spot color library.

- Select All button

  Select all the custom spot colors in the table. You can duplicate or delete a multiple selection.

- Gamut Check button

  Check what percentage of L*a*b* spot colors lies within the color gamut of your printer. The color gamut describes the full range of colors that the printer can reproduce. During job processing, spot colors that are out of gamut are mapped to the nearest possible color within the available color gamut. The deviation in color is displayed as a delta E value.

  To perform a gamut check, select one or more L*a*b* spot colors, and click Gamut Check. The button is not available for spot colors that are not defined in the L*a*b* color space.

  By switching between workflows and print configuration sets, you can quickly find out which combination will produce the best results.

The improved program window provides quick access to all internal spot colors and their definitions, as well as to your own user-defined spot colors (2).

The Search button enables you to find spot colors quickly and easily for editing.

Color Definition tab
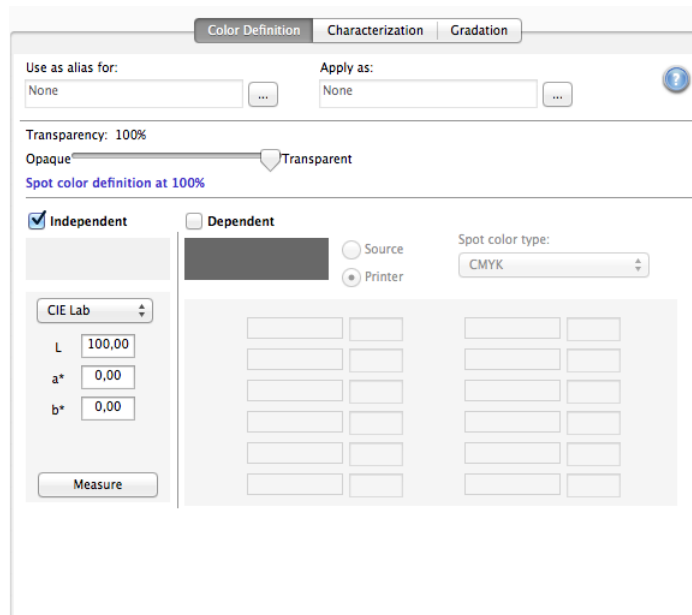
- Use as alias for

  You can create a fixed link to an existing spot color. An alias spot color has exactly the same color properties as the original spot color, but is saved under a different name — for example, you could set up the spot color "NewSpotColor" as an alias for a PANTONE color.

  You cannot edit the color properties of an alias spot color, but any changes you make to the original spot color are automatically applied to the alias also.

  By creating an alias, you can ensure that exactly the same color values are used for both spot colors, without renaming the spot color in the graphics application.

- Apply as

  If your printer supports white ink, clear ink, or metallic inks, you can assign any of these additional printer inks in addition to the original spot color definition. The additional inks are printed either behind or on top of the original spot color, depending on the order you have defined on the printer's Special tab.

  You can use these settings to simulate the final production run on a white or colored substrate. Interesting special effects can be achieved for use in the packaging industry if your printer supports the appropriate ink colors.

- Transparency

  The transparency setting affects overlapping colors. A transparency value of 100% means that overlapped colors can shimmer through. A transparency value of 0% equals 100% opacity and means that overlapped colors are knocked out.

- Spot color definition at 100%

  Define a full-tone spot color. Select "Independent" to measure a color patch in the CIE L*a*b* or CIE LCH color space. Select "Dependent" to enter color values in the color space of the output devic or the source profile.

Creating characterizations for specific spot colors
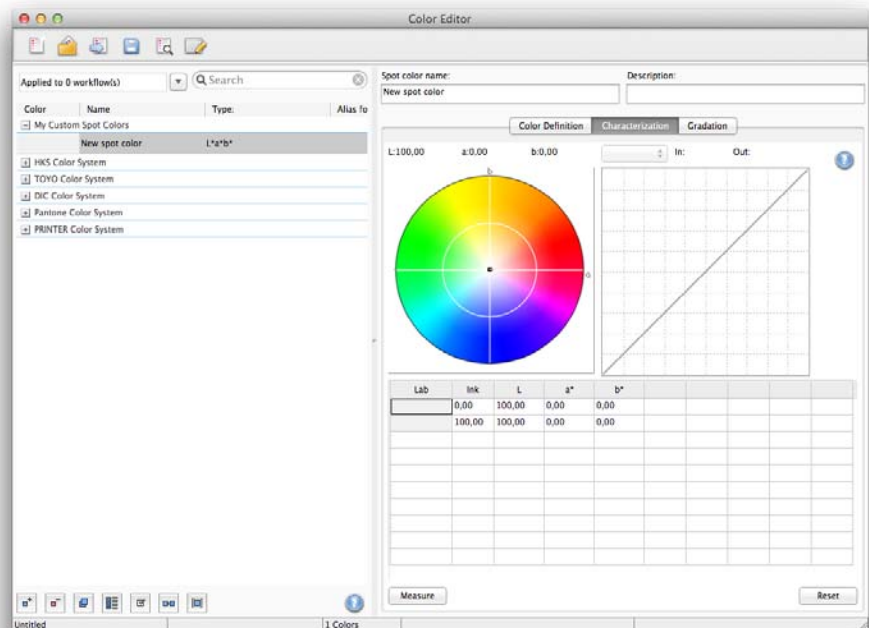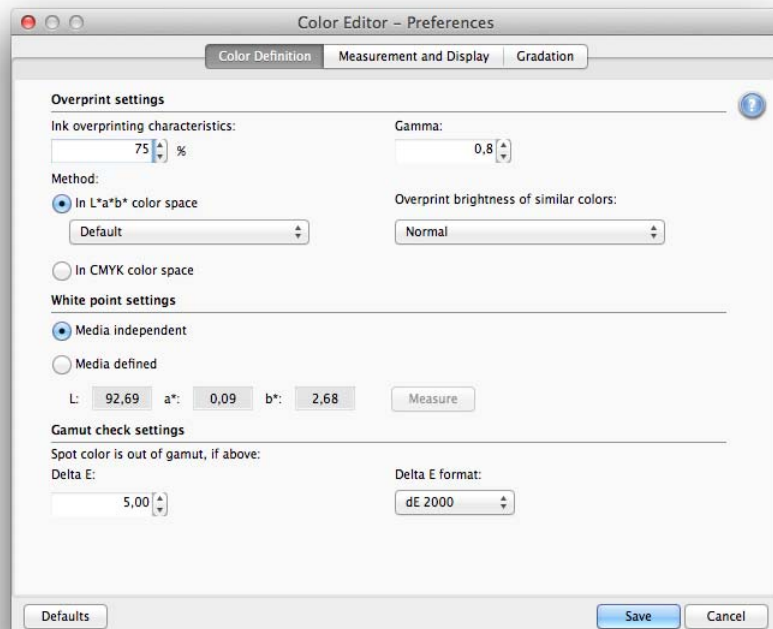

On the Characterization tab, you can define up to 99 color gradients for each spot color. Color gradients that are defined in the L*a*b* or LCH color space are included in the dynamic wedge.

By default, the diagram shows the 0% and 100% color values of one ink. 100% represents the full-tone color that you defined on the Color Definition tab. 0% represents the color of the media. By default, 0% equals the unmeasured value for pure white, i.e. the L*a*b* value 100/0/0.

To add color gradients in the printer's color space, type appropriate values in the characterization table. To add color gradients in the L*a*b* or LCH color space, measure a color patch, or type in the color value.

If you have defined a gradient in the printer's color space, you can finetune it by dragging the appropriate point along the curve in the diagram.

Making changes to the gradation curve

If you have a spot color with different gradients and find that one gradient is too bright or too pale in the printout, you can modify the brightness by adding or subtracting color along the gradation curve.

To modify a point along the curve, drag the point upward (to add color), or downward (to subtract color). Alternatively, you can type the required coordinates directly in the table.

You can delete a gradient by selecting a row in the table and pressing <Del>. It is not possible to delete 0% and 100% values.

The settings in detail

Color definition tab

- Ink overprint characteristics

    Normally, when two different colored objects overlap, there is a knock-out effect. They will not print on top of each other. Intentionally printing one layer of ink on top of another is known as overprinting.

    The overprint setting defines how two or more spot colors will behave when printed on top of each other.

    A higher setting results in a darker printout. For example, an overprint value of 100% means that the colors will be completely added to each other — something that is not possible on a proper printing press.

    A lower setting results in lighter printouts because colors appear more opaque and hide parts of other colors.

- Gamma

    Modify the dot gain simulation for overprinting spot colors. This setting is applied to areas with a mixture of spot colors and process colors, or to areas that consist of more than one spot color. It lets you define non-linear behavior for overprinting.

- Method

    Overprinting in the CMYK color space is based on a simple CMYK addition.

    In the L*a*b* color space, the default setting is based on the Bradford and ROMM chromatic adaptation transforms (CATs). CATs are able to predict corresponding colors under different illuminantion sources. Fiery XF supports many different chromatic adaptation models, including Bradford CAT, XYZ Scaling, vonKries, and Sharp CAT. Select a CAT to define the overprint behavior of L*a*b* colors.

    You can accentuate the brightness of overprinted colors that are very similar to each other — for example, yellow on yellow, or magenta on red.

- White point settings

    The color tint of the media is known as the white point. The white point of the print media affects the color accuracy of the printout. Particularly in a proofing workflow, it is important to be able to simulate accurately the color tint of the final media.

    You can use a measuring device to measure the media white point — for example, if the simulated color does not match the color in your swatch card. The white point is taken into account in your spot color definitions and corrected.

- Gamut check settings

    You can check how accurately an L*a*b* spot color can be reproduced using the selected profiles. You can also check if an L*a*b* spot color lies within the color gamut of your printer. The color gamut describes the full range of colors that the printer can reproduce.

    Define the acceptable tolerance limit as a delta E value. Delta E is used to measure the mathematical difference between two colors in the L*a*b* color space.

    This setting effectively increases the color gamut by the delta E value that you define here. It allows spot colors that lie within the tolerance area around the color gamut to be accepted as in gamut.

Click Save to save your changes. Click Defaults to reset the settings on all Preferences tabs to their original values.

Measurement and Display tab
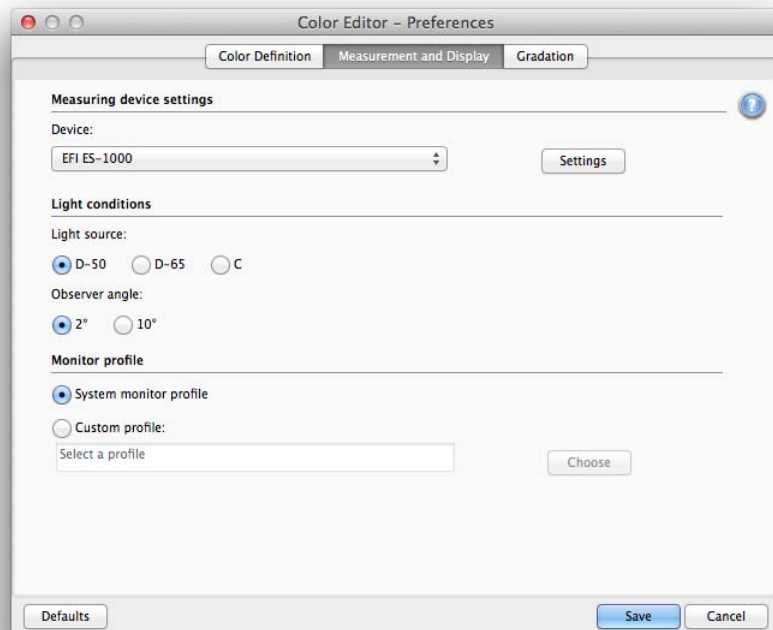
- Measuring device settings

  Use an ES-1000 or ES-2000 measuring device to define a 100% colorant and gradients, or to measure the white point of a media. Click Settings to make device-specific settings.

- Light conditions

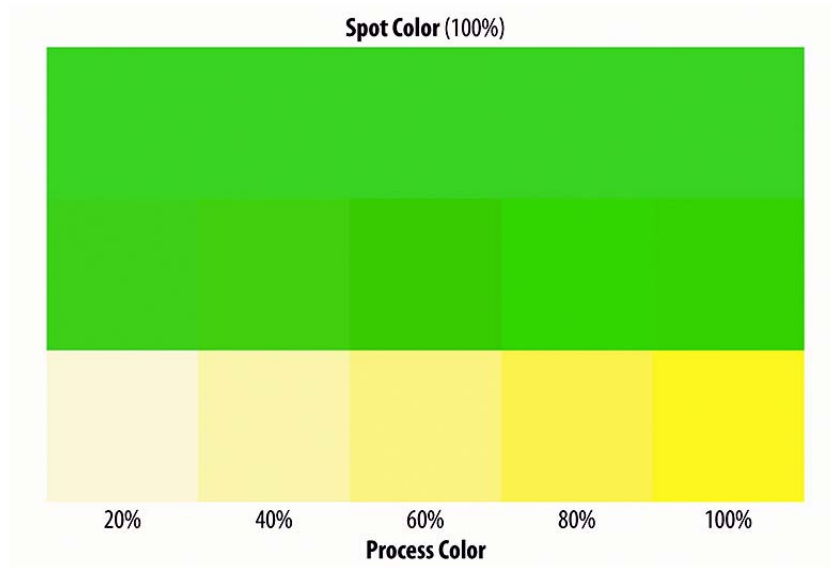 Define how spectrophotometric values are converted to L*a*b*.

  Select a light (illuminant) source: D-50 (horizon light), D-65 (artificial daylight at noon) or C (daylight).

  Select an observer angle. Two degrees is the default setting, but the larger viewing angle of ten degrees is sometimes used in the packaging or textile industry.

- Monitor profile

  Monitor profiles are used to simulate and verify color accuracy on a computer screen. Windows and Macintosh computers provide standard monitor profiles as part of the operating system software. You can select a monitor profile that is provided with the operating system, or you can select a custom monitor profile.
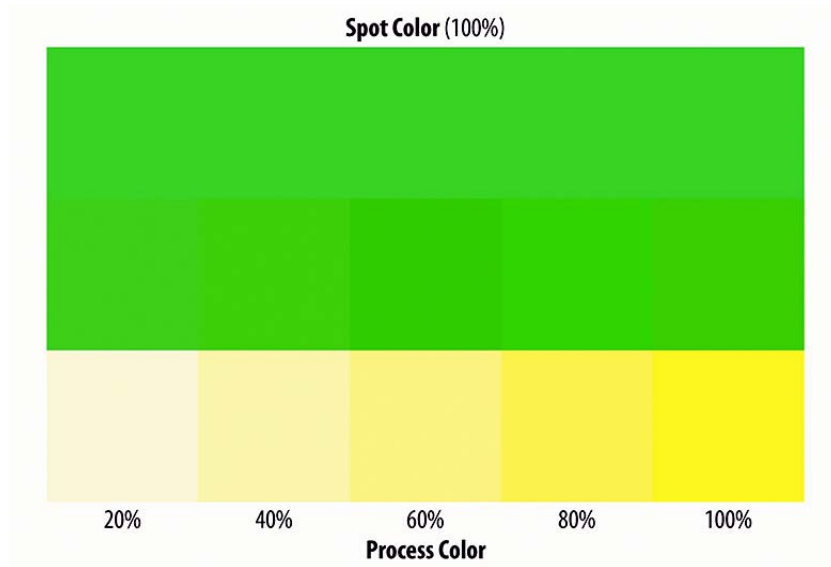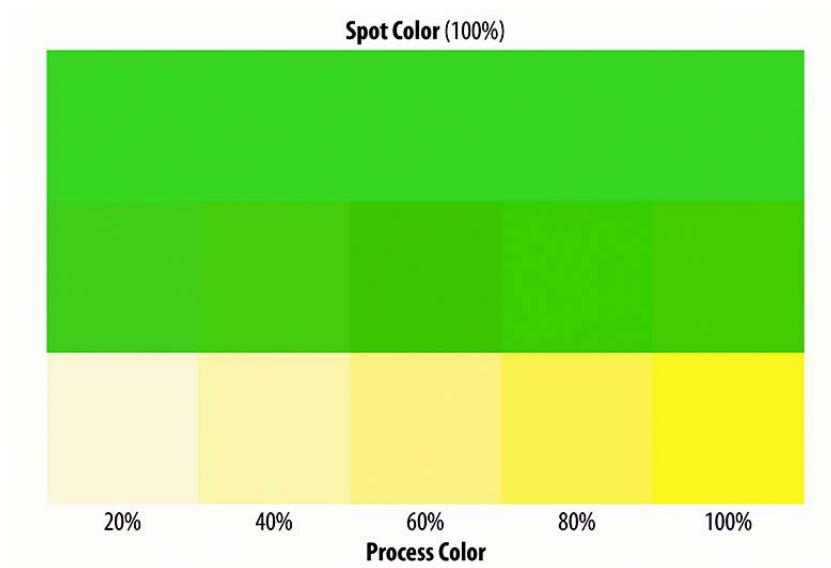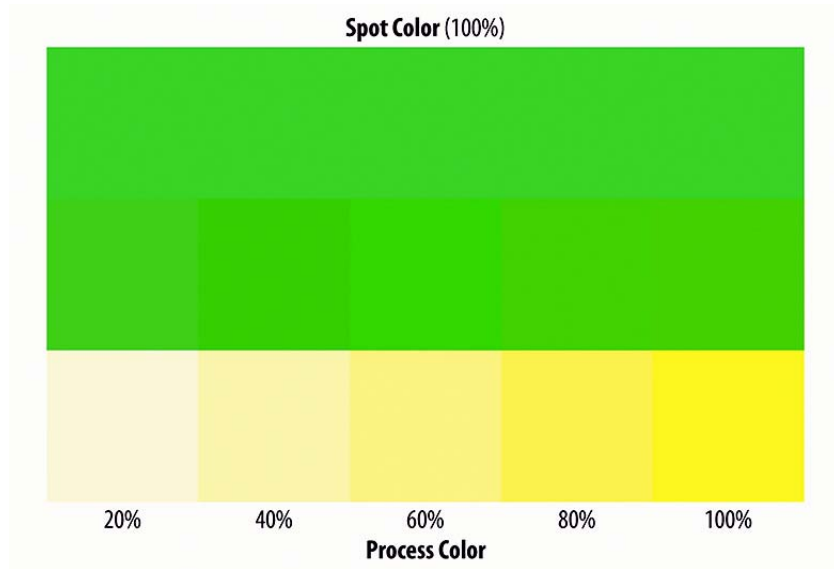
Gradation tab

If you have a spot color with different gradients and find that one gradient is too bright or too pale in the printout, you can modify the brightness by adding or subtracting color along the gradation curve.

To modify a point along the curve, drag the point upward (to add color), or downward (to subtract color). Alternatively, you can type the required coordinates directly in the table.

Select "Apply to current table", if required. If the check box is not selected, the setting is applied to future spot color tables that you create.

Examples of the different methods of overprinting

The following examples illustrate the different methods of overprinting (in a standard Fogra39 workflow with 75% overprint and a gamma of 0.8).

Please be aware that the following examples are intended solely to help you to decide which method to use. The examples are not color accurate. For more accurate color results, please download the separated, high-resolution image files from:

http://fierywideformat.s3.amazonaws.com/FieryXF50/TechSupport/General/Spotcolor%20Methods.zip

Default setting in Color Editor

BSPC Cat

CatO2
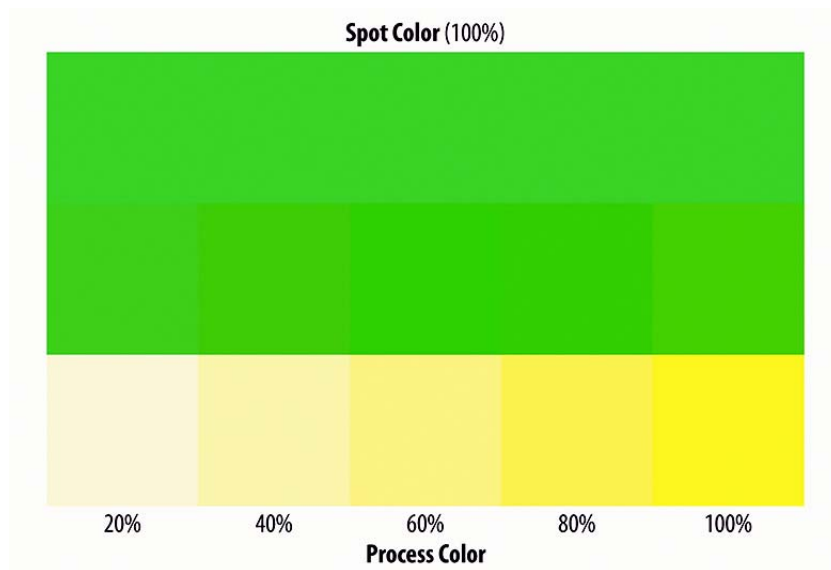
CIECAMO2

CMCC Cat 2000

Prime Cat
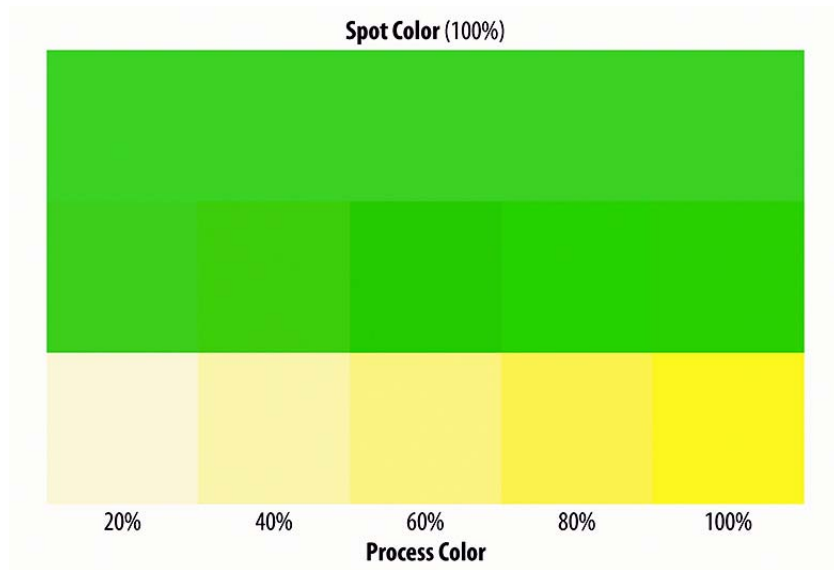
ROMM Cat
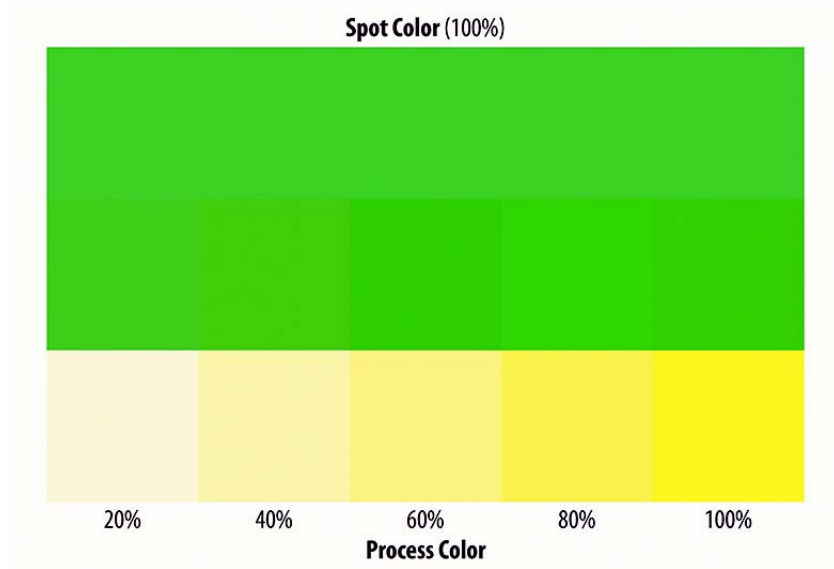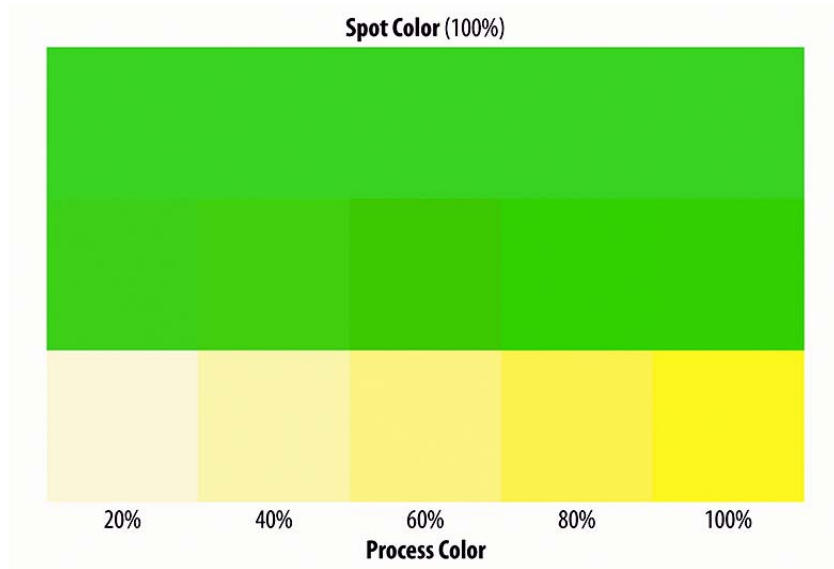

Sharp Cat
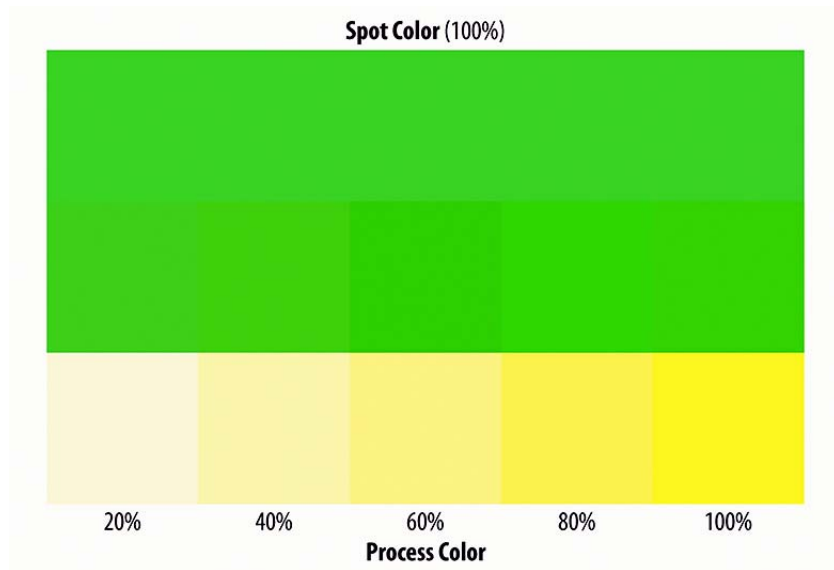
VonKries
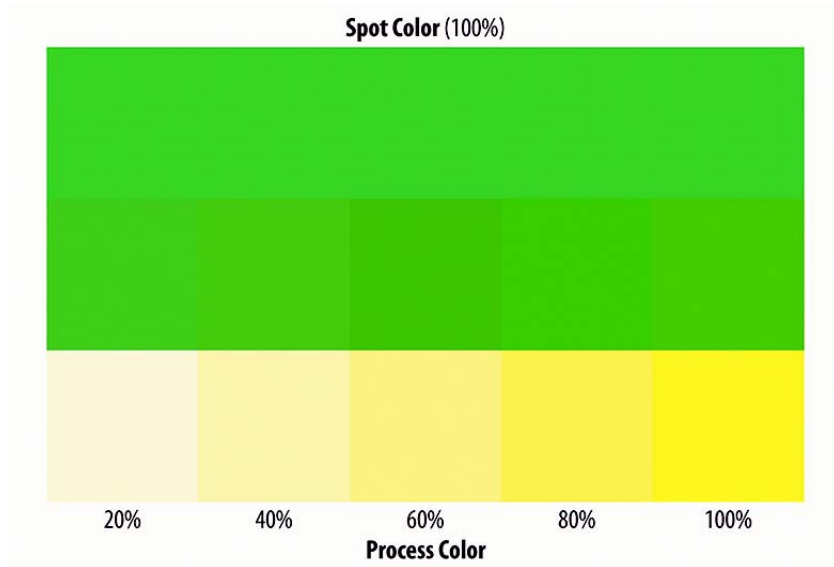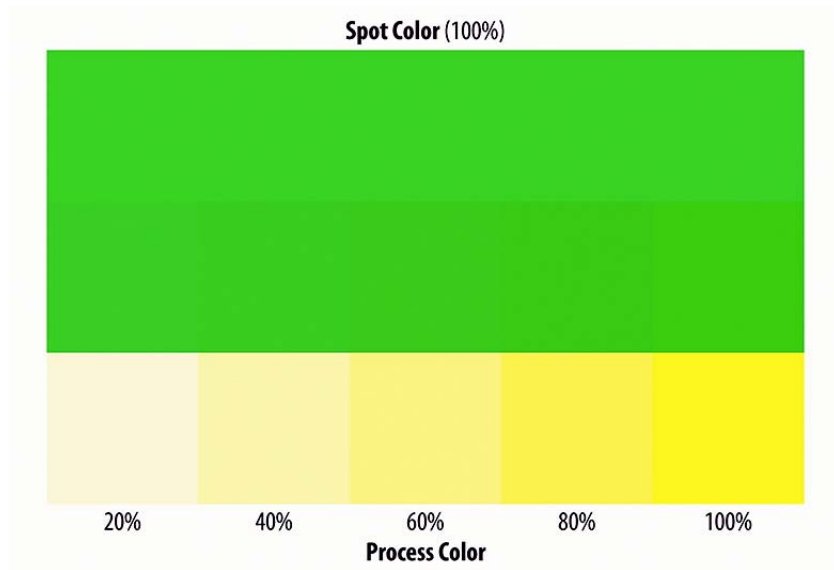

XYZ scaling
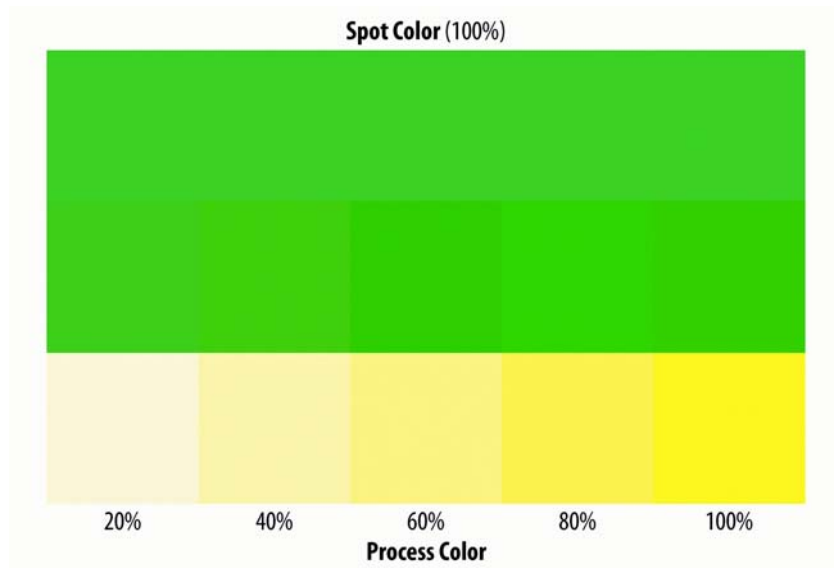
Bradford

CMYK Addition

# Frequently Asked Questions

How can I change the order in which the colors are printed?

In version 5.0, the order in which colors are printed can be easily changed in Job Explorer.

When you select a job, you can use the up/down buttons on the Color->Spot Color pane to change the order.

The following images are intended to show what effect changing the print order of colors has on the end result. If one color is printed on top of another, it changes the trapping characteristics, making some colors appear stronger and others weaker.

- Spot color printed on process color
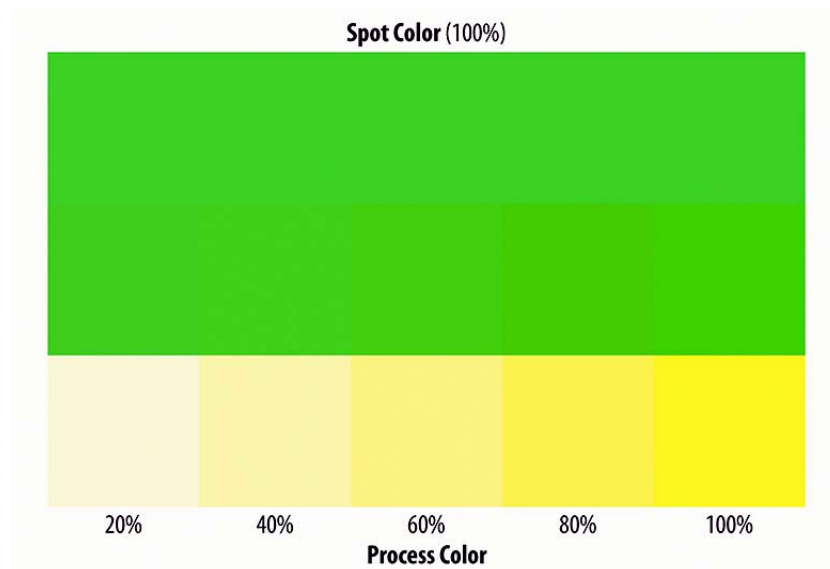
- Process color printed on spot color
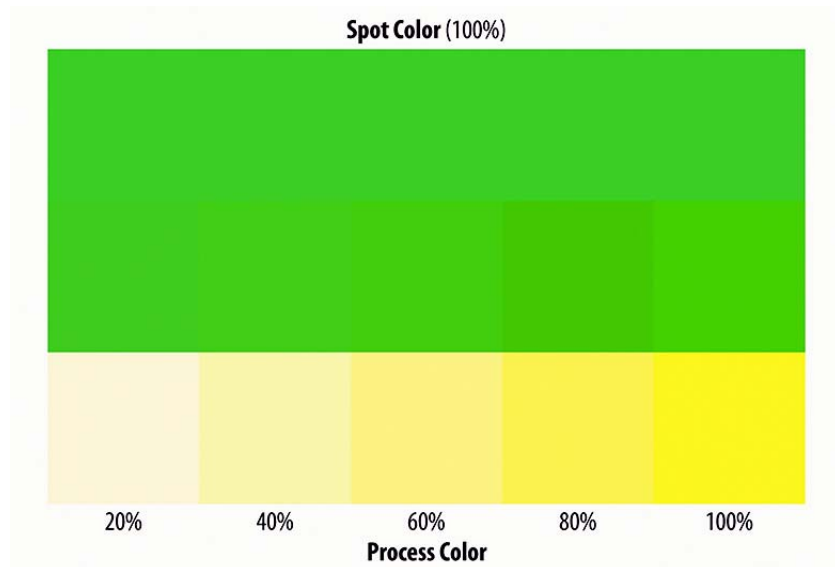
I have changed the print order or colors, but it does not have any effect!

Please check to see if the colors are 100% transparent.

If the colors are 100% transparent, changing the print order will make no difference. This is because print colors have a certain opacity, so you must enter a corresponding value.

My spot colors come out too dark when overprinted, although the L*a*b* definition is correct!

Color Editor has a setting that lets you define the brightness for overprinting. In the Overprint settings, you can choose between three different modes: Normal / Slightly brightened / Strongly brightened.

The new features/settings in Color Editor have no effect on my printouts.

To make full use of the new Color Editor settings you need to use the new spot color table format (*.cxf). Only the cxf file format enables you to configure your spot color output to specific conditions (at the customer site/at the printer's).

It is possible to use an "old" spot color table (*.bct) but, in this case, as in previous versions, some ticket editing is required, which is not recommended!

How can I create/check a spot color optimization for specific colors in my document?

The dynamic wedge was designed for this purpose. You can create a dynamic wedge either globally for all jobs that are loaded into the workflow, or for a current job:

You can verify and optimize the job-specific colors in a dynamic wedge. After measuring the printed dynamic wedge, you can optimize colors that are not within the required tolerance, by clicking the appropriate button in Job Explorer. This procedure creates an optimization file (*.3cc) file.

Can I measure and optimize spot color gradients?

It is possible to measure and optimize the gradients of spot colors, but only as long as the gradients have already been defined on the Characterization tab. For more information, see "Creating characterizations for specific spot colors" on page 4.

I cannot perform an optimization in all workflows!

Please be aware that the Linearization workflow cannot be used to verify and optimize spot colors!