

## **COMPUTER SCREEN AND PRINT**

A distinct difference can exist between color examples from the computer screen and printed swatches. On-screen colors (transmissive color) are typically described as being more intense and brighter than printed hues.

Here's why:

When you look at colors on a computer screen, the colors are made according to a system that is similar to the way the human eye distinguishes color. This is the RGB (Red, Green, Blue) system. In the RGB system, all colors are derived from combinations of Red, Green and Blue. This system is an additive color system as colors are added to a black background on the monitor. However, printed inks are usually composed from two different systems altogether. Printed inks use either the CMYK (Cyan, Magenta, Yellow, Black) system or the PMS (Pantone Matching System).

The CMYK system is considered a subtractive color system, and in this system all colors are made from the combination of four colors: Cyan, Magenta, Yellow and Black. CMYK is usually used in multicolored layouts and magazines because of the simple ability to print so many colors by mixing just four tones.

PMS colors are comprised from nine basic colors, including white. From the specific combination of these nine colors, PMS can produce over 700 exact colors. This system is often used in creating business cards and letterheads.

As you can see, the main difference in on-screen colors as opposed to printed ink colors occurs because all three systems described above initially combine different colors that make different tones. This is the reason why what you see on your computer screen may be different than what is actually printed.

## **ELECTRONIC / DIGITAL PROOFS**

Electronic proofs (or soft proofs) are a PDF of your print project. It's simply a simulation of your intended print piece on a monitor. While it's convenient for sharing and reviewing, a soft proof can often be insufficient for ensuring color consistency. After all, what you see on screen can be deceiving. Calibrations, lighting, and even the stock your job will print on can dramatically alter the accuracy of what you see from a soft proof.

## **DIGITALLY PRINTED PROOFS - AT REQUEST - ASK FOR COST**

Unlike soft proofs that are merely digital PDF proof versions of your print project, digitally printed proofs (or hard proofs) are actually printed on a digital printer or other output devices. This proof acts as a sample of your final print project without any major finishing effects.

The advantage of running a hard proof is that you are able to see a physical print version of your project on the substrate it will be printed on. This allows you to check for color consistency, as well as other important elements, such as how well your design aligns with folds, cuts and other technical elements.

**With that said, hard proofs are not 100% accurate.** Printing on a digital printer versus a press can change the final result significantly. Moreover, the end product can vary depending on the substrate (chipboard, plastics, linen, SBS, etc.) you are printing on.

A hard proof may still lack enough resemblance with your final piece for complete accuracy. Things like coatings or gloss/dull variances are hard to simulate.