

SMART.



The color of ideas.

FASHION+HOME A SMART new system.

Technical Benefits

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As fashion and textiles evolve, so does the thinking at Pantone, Inc. Technical advancements in today's marketplace have inspired us to redesign our PANTONE FASHION+HOME Color System so it works harder for you.

To help uphold consistency and accuracy of all 1,925 colors in our System, we formed a partnership with Clariant International Ltd., one of the world's largest textile colorant and chemical producers. Together, Pantone and Clariant are proud to introduce **SMART** formulation, the world's first method of color creation designed with the fashion and home furnishings markets in mind.

- SENSIBLE** Consistent, reproducible color
- MANAGEABLE** Optimized color constancy
- ACCESSIBLE** Readily available swatches using globally available dyes
- RELEVANT** Colors selected from the fashion and home marketplace
- TOUGH** Durable colors formulated to maximize colorfastness

SENSIBLE (S) (Consistent, reproducible color)

A sensible color saves tremendous amounts of time and money. Working closely with Clariant, we dyed **hundreds of lab dips** to develop each color and moved to production only when the dyestuff combination was clearly reproducible across multiple pieces of lab and production equipment. With Clariant's formulation¹, your mill or vendor can reduce the color development cycle by 50% or more.

Pantone has also successfully **balanced the use of visual and digital color** evaluation to create a streamlined color development process that produces the same color every time. This critical change will help you maintain utmost color accuracy from initial design concept through each development stage. Using the SMART principle, all colors have been reformulated for optimum batch-to-batch consistency, commercial reproduction and exceptional colorfastness properties².

To protect the color during storage and shipping, each SMART color swatch card is packaged airtight in a BHT-free UV protective pouch. We have improved our own manufacturing processes by ensuring all spectral readings are done in temperature and humidity conditioned environments³, and our lab-to-production correlation is less than 0.5 ΔE CMC_(2,1). Every dye lot is evaluated against the master digital standard and must pass both the digital and visual evaluation to become a **PANTONE SMART color swatch card**.

MANAGEABLE (M) (Optimized Color Constancy)

Color constancy (or inconstancy) has become an important consideration in color development. Constancy refers to how the color matches itself when lighting conditions change. For example, **a color with high constancy would look very similar when viewed under D65, CWF and TL84 light sources**.

Constancy is different than **metamerism**, a term used to describe when **two or more samples match under one lighting condition but do not match under another**.

Though it is impossible to completely prevent color inconstancy, Pantone and Clariant expertly evaluate every dyestuff combination to minimize this affect.

ACCESSIBLE (A) (Readily available swatches created using globally available dyes.)

PANTONE SMART color swatch cards are available in 75 countries worldwide. Our extensive distribution network guarantees that the perfect color is only a phone call away. Log onto www.pantone.com to find a dealer near you.

Plus, Pantone is the only **globally recognized and accepted color system**. Environmental policies and regulations are not the same in every geographical region. If a color's recipe contains dyestuffs that cannot be sold due to environmental restrictions, matching the color can be quite a challenge. To ensure that all 1,925 colors in the PANTONE FASHION + HOME Color System are reproducible by your favorite mill or vendor, we used only **globally available, approved dyestuffs** to create our SMART formulations.

RELEVANT (R) (Colors selected from the fashion and home marketplace)

Finding your color inside the PANTONE System is not a coincidence; it is there by design! One of the most important features of the PANTONE System is its relevance to your marketplace. At its inception, Pantone evaluated 10,000+ products in the fashion and home markets to select the most relevant shades for those industries. Every few years, we add new colors that reflect market trends and new core shades. **The most frequent comment we receive is how often designers find the exact color they are looking for in the PANTONE FASHION + HOME Color System and nowhere else.**

Most other color systems in the market today were created using a theoretical or randomly generated color gamut. The result: colors are often very close in shade and have limited production application. Though no color system can offer every possible color, working with the most relevant color system to your market helps to ensure your products are the right color for the season.

TOUGH (T) (Durable colors formulated to maximize colorfastness)

As part of the SMART formulation process, Pantone and Clariant carefully selected dyestuff combinations for each color that provide **excellent lightfastness, as well as durability to washing, dry cleaning and wear**². Every recipe was selected to meet typical garment fastness requirements and customer expectations. In addition, Pantone is proud to offer **online color matching services, in-plant technical support** for color matching, and **spectral data** for each PANTONE Color to minimize the color development timeline.

ONLINE COLOR MATCHING AND 24/7 TECHNICAL SUPPORT

To help ensure our customers find the appropriate dyestuff recipes to match PANTONE Colors, Pantone and Clariant have created **www.MatchPantoneColors.com**. The Web site provides users with suggested starting formulations to match PANTONE Colors on any desired fabric¹. Though other dyestuff suppliers can match PANTONE Colors, using a formulation directly from Clariant ensures **the best match with the lowest metamerism in the shortest amount of time**. This quickly translates into lower cost and a much faster development cycle.

MatchPantoneColors.com users can also find educational articles regarding color and product development, as well as helpful tips for color control and communication.

“IN-PLANT” COLOR MATCHING SUPPORT (Working for you at the mill or vendor level!)

SMART formulation provides realistic, reproducible color and our partnership with Clariant allows us to offer color matching support at your favorite mill or vendor. If a vendor says your color is too difficult to match, Clariant's application experts can step in and help make your color inspiration a production reality. Thousands of dyestuff and chemical application experts are ready and waiting to help match your color. Visit **www.MatchPantoneColors.com** to find contact information for the Clariant representative near your mill or vendor.

SPECTRAL DATA AND DIGITAL COLOR COMMUNICATION

For those who require digital color information, Pantone also offers spectral data for all 1,925 SMART colors. In combination with a PANTONE SMART color swatch card, spectral data helps to reduce metamerism and provides the most accurate standard combination for multiple vendor production of garments and home furnishings products. Spectral data also allows users to create a permanent digital library of color standards that will not fade or age and communicate PANTONE Colors electronically. The data is available as a download or through PANTONE Licensees; please visit **www.pantone.com** for more information.

- 1 Pantone and Clariant assume no liability for the accuracy of formulations. We recommend that each customer perform lab dyeings of each formulation and evaluate each lab dyeing visually for color matching prior to production.
- 2 Pantone and Clariant do not guarantee any fastness properties or performance characteristics and assume no liability for the performance of suggested formulations. We recommend that each customer test their dyestuff recipe for performance prior to approving colors for production.
- 3 Pantone conducts all visual and instrumental color evaluations in temperature and humidity controlled environments using D65 lighting. For optimum color viewing and measurement, Pantone recommends a temperature of 70° F (21° C) +/- 1° F and 50% relative humidity.