Progressive, Profitable Printing

HP HIGH-SPEED coating technology

for high-speed production printing applications

The family of HP Inkjet Web Presses is designed for the high-speed, production-volume printing of a variety of quality printing solutions optimized for publishing, direct mail, transactional, and transpromotional applications.[1] Leveraging the breadth and depth of HP's experience in digital printing, HP Inkjet Web Press solutions deploy innovative technology—from the press itself, to the ink formulations, Bonding Agent, and sophisticated media coatings—that break cost and performance barriers, enabling customers to respond to new opportunities and open new markets.

Choose the solution matched to your needs

HP Bonding Agent can be used on low-cost, standard uncoated offset media that customers are using today to produce outstanding image quality and durability. To further improve print quality, customers can explore media options that incorporate paper enhancement technologies into the paper-making process. These options include uncoated papers with ColorPRO Technology as well as papers with HP high-speed coating technology—all specifically designed for HP pigment inks and the family of HP Inkjet Web Presses. This document provides technical background for HP high-speed coating technology.

High-quality coated prints at high speed

HP high-speed coating technology is designed with HP pigment inks to maximize the performance of the HP Inkjet Web Press. This new coating is formulated for rapid ink absorption at full press speed—for example 400 feet (122 meters) per minute on the HP T300 Color Inkjet Web Press—and delivers rich blacks, a broad color gamut, and excellent print quality overall.

Ideal for professional and educational books and direct mail applications, HP high-speed coating technology enables a wide range of quality publications from textbooks and workbooks to business, law, medical, technical, and scientific publications, to transactional and transpromotional campaigns.[1] Papers offered by industry-leading media providers feature HP high-speed coating technology to enable the digital economics and productivity advantages of the HP Inkjet Web Press product family. In addition, coated papers featuring highlighter-resistant HP high-speed coating technology offer highlighter-resistant text for the unique application needs of college textbooks.

The performance difference

Papers featuring HP high-speed coating technology offer print quality and performance advantages:

- Clear, sharp text and line quality
- Rich blacks and saturated colors

And to meet the particular needs of college textbooks:

- Highlighter resistance

(1 In some cases, solutions based on the HP Inkjet Web Press platform will be available through an HP authorized reseller or systems integrator.

The technology behind the coating

To deliver the many benefits of digital technology, such as high-speed variable-content printing, HP high-speed coating technology is formulated for rapid ink absorption and fast dry times to provide high-quality printing at full press speeds. Pigments in HP pigment inks are quickly immobilized at the paper's surface for consistent dot-gain and for reduced dot coalescence and color-to-color bleed. Pigments remain at the surface for good black optical density and to produce bright, saturated colors.

The performance of HP high-speed coating technology is an important advancement for digital inkjet printing. Coated offset media have been developed and optimized for the chemistry and physical properties of offset inks. The coatings absorb water very slowly, and calendaring the media to produce a smooth surface reduces water absorption even more. This so-called "holdout" property of coated offset media presents problems for printing with water-based inks: ink remains liquid on the surface until the sheet is dried. This can cause dot coalescence, which produces mottling in colored area fills, and color-to-color bleed. For these reasons, water-based inkjet inks generally cannot provide high-quality when printing directly on standard coated offset media, and a high-speed coating technology specifically designed for water-based inkjet systems is needed. Papers with HP high-speed coating technology produce clear, sharp black text and lines, and rich, saturated colors. The color-to-color bleed performance is shown in Figure 1.

And for the unique needs of publications, such as college textbooks, HP high-speed highlighter-resistant coating technology provides extra durability, as seen in Figure 2.

Explore a range of substrates from industry-leading partners

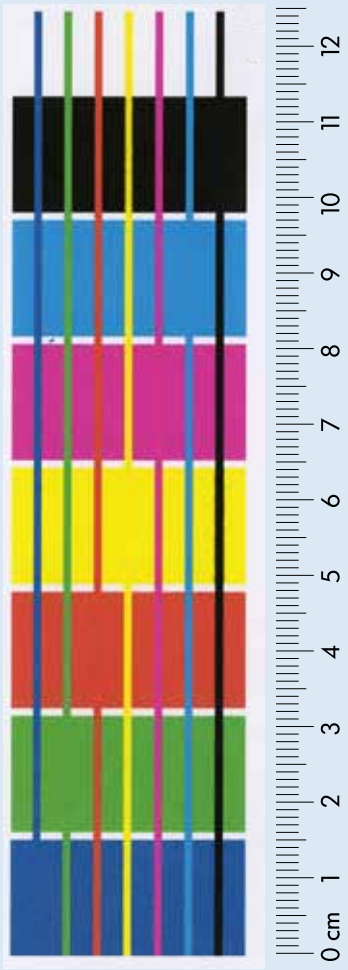
HP technology enables a variety of high-performance substrates across a range of basis weights (text to cover) and paper substrates, with both matte and dull finishes. HP high-speed coatings will first be available with wood-free papers and extended to thermomechanical pulp (TMP) and hybrid substrates in the future.

As HP develops partnerships with leading paper providers, customers can explore a wide range of products featuring HP high-speed coating technology from familiar brands.

HP high-speed coating performance on the HP Inkjet Web Press

Prints produced on HP Inkjet Web Presses using papers with HP high-speed coating technology deliver rich blacks, a broad color gamut, and excellent print quality overall.

Figure 1: HP high-speed coating technology color-to-color bleed performance



HP high-speed coating technology is formulated for rapid ink absorption and fast dry times to provide high-quality printing—including clean color-to-color borders—at full press speeds.

Figure 2: HP high-speed highlighter-resistant coating technology

	Paper with HP high-speed coating technology with inkjet inks	An inkjet coated paper with inkjet inks
With Sharpie highlighter	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Pellentesque sit amet lacus in mauris faucibus posuere at eget nisi. Proin bibendum mi in ligula semper sit amet	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Pellentesque sit amet lacus in mauris faucibus posuere at eget nisi. Proin bibendum mi in ligula semper sit amet
With Faber-Castell highlighter	Aliquam fermentum nunc quis justo aliquet vehicula. Donec eu commodo nisl. Donec at sapien in justo dignissim pellentesque non sed nisi. Curabitur bibendum velit sit amet	Aliquam fermentum nunc quis justo aliquet vehicula. Donec eu commodo nisl. Donec at sapien in justo dignissim pellentesque non sed nisi. Curabitur bibendum velit sit amet

Text highlighter-resistance comparison using commonly available highlighter brands. Samples with two-pass highlighter application 72 hours after printing.

For more information on the family of HP Inkjet Web Presses, visit:
www.hp.com/go/inkjetwebpress

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