Anchor PAPER CO.

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DIGITAL PAPER PROPERTIES

How Paper Properties Affect the Digital Printed Result

What makes a paper the "right" paper for a printing application?
The features that follow affect digital printing results, including equipment performance and general run ability, as well as the appearance of the finished, printed product.

- Curl control
- Brightness/whiteness
- Precision sheeting
- Sizing
- Stiffness
- Moisture control
- Smoothness
- Formation
- Grain direction

Understanding these properties is the first step in understanding which papers to recommend to your customers. We'll take a look at each of these properties to see how they can affect the digital printing process.

Curl Control

Built-in curl ensures that paper will travel the paper path in a piece pf printing equipment without interruption and will lay flat once it has been printed. Excessive curl can result in a finished product that does not lay flat. Too little curl can cause jams. The benefit of proper curl control is jam-free, superior run ability.

Surface Sizing

A material, predominantly starch, is applied to the surface of the sheet during production to control the absorption of ink into a sheet, thus affecting toner adhesion and inkjet print quality. The benefit of proper sizing is optimized print quality.

Smoothness

Smoothness refers to the surface texture of a given sheet and affects toner and/or ink adhesion, which affects the final print quality. Ultra smooth papers provide sharper imaging in laser applications. A different, lesser level of smoothness is manufactured into inkjet papers to control blurring and feathering of ink as it lands on the surface of the paper. The benefit of a sheet with the proper smoothness is a crisper, better-defined image.

Brightness/Whiteness

Both brightness and whiteness are a measurement of light reflection from a sheet. The brighter and whiter a sheet is, the more vibrant the print image will be. The benefit of a brighter, whiter sheet is intense contrast and truer color interpretation.

Stiffness

The stiffness of a sheet refers to its resistance to bending and folding. A stiffer sheet will feed and run through the paper path without jamming. The benefit of a stiffer sheet is superior runnability and less equipment down time.

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Formation

Formation refers to the disposition and distribution of the fibers in a sheet of paper. The closer or tighter the distribution of fibers, the better the sheet formation. Formation can provide higher opacity, providing better results when duplexing, as well as even ink distribution. The benefit of a sheet with superior formation is less mottle in the printed result.

Precision Sheeting

Precision sheeting refers to a controlled process on specific equipment that ensures true "squareness" of the sheet. Improperly sheeted products can cause miss-feeds and paper jams. The benefit of precision sheeting is a jam-free run on complex equipment.

Moisture Control

Premium business papers contain a very specific percentage of moisture (4 - 6%) to sustain the intense heat associated with the laser printing mechanism of printers, copiers and high-speed production equipment. Too little moisture will cause static build-up and cause paper curl. The benefit of proper moisture control is superior runnability and jam-free operation.

Grain Direction

Grain refers to the predominant alignment or direction of fibers in a sheet. Paper folds easier and resists cracking when folded with grain direction (i.e. 18" x 12"). The benefit of matching grain direction to score and fold direction is cleaner fold with no cracking of the printed sheet.

Papers to Help You Get Geared Up for Digital Technology

Business papers from Anchor Paper are uniquely geared to offer solutions for superior performance in the areas of growth-market digital printing technologies. Premium business papers were developed specifically to address the changes in the digital printing marketplace. Technology opened the market for premium business papers.

What are Business Papers?

Business papers are precision cut-size papers, usually defined as the following sizes.

- 8½" x 11"
- 8½" x 14"
- 11" x 17"
- 2" x 18" (in some cases)
- New sizes emerging to suit technology: 14.25" x 20.33" for iGen3

Premium business papers are papers designed to meet the specific needs of digital printing technology, including inkjet printing, laser printing and direct-to-plate offset printing, such as that done on the Heidelberg Quickmaster. New sizes in cut-size papers are also emerging to accommodate the development of new equipment, such as 14" x 20" paper for the Xerox DocuColor iGen3.

These sheets are engineered with special features to enhance digital printing, such as surface coatings for smoothness and enhanced run ability, and superior opacity for duplex printing. Many business papers are offered in brighter white shades, up to 98 bright, for superior color interpretation.