GRAPHIC TRAPHIC

From Concept Through Print

Paper Basics: FOUR CATEGORIES OF PAPER

Papers may be divided into four basic categories: Book, Cover, Text and Bond. The following is a brief description of each.

"Book" papers are those ordinary papers suitable for books, magazines, catalogs, brochures and general printing needs. Book papers are generally smooth and coated.

"Cover" papers are like book, but heavier. They are suitable for book covers, presentation folders, postcards and similar products that call for sturdy, durable stocks. Many book papers have companion stocks which are cover weight.

"Text" is short for *"textured,"* and text papers are similar in thickness to book, but are used on projects where the surface pattern and paper color form integral parts of the design. Typical uses include annual reports, announcements and high end brochures.

"Bond" papers are those commonly used for writing, photocopying, and business forms. High quality bonds, however, have from 25% to 100% cotton fiber and are often used for prestigious letterhead and announcements. In addition to these basic four categories, there are miscellaneous papers such as index, bristol, tag, board and newsprint which have special uses.

Paper Basics: PAPER WEIGHT AND SIZES

When selecting a paper, designers and print buyers are generally concerned about the thickness or "caliper" of the stock. Interestingly, however, in the paper industry the terminology of weight (pounds) is used to refer to how thick a paper feels. *For example, 100# Book is thicker than 80# Book, and so forth.*

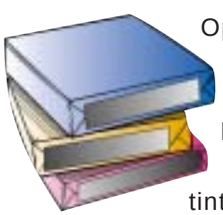
Describing paper this way came about because Paper mills actually sell paper by weight. In order to standardize within the industry, the mills first decided on a "basic size" for the different kinds of paper they manufactured. Then, they decided to price various kinds of paper by the weight of 500 sheets *(one ream)* of that basic size.

To help clarify why this system was necessary, consider a mill that has enough pulp to manufacture 80 pounds of paper. The mill could make the pulp into 500 sheets of 25"x38" Book or 500 sheets of 20"x26" Cover. Both reams would weigh the same and both would consist of 80# paper. However, the Cover paper would be almost twice as thick as the Book paper, but its sheets would be about half the size (520 square inches vs. 950 square inches). This system is not necessarily *"user friendly"* but it is the one that is now used throughout the industry.

The "Basic Sizes" Of Paper Used To Determine "Weight":

Paper Type	Paper Size
Bond	17"x22"
Text, Offset, & Coated Book	25"x38"
Cover	20"x26"

An Important Consideration: OPACITY AFFECTS READABILITY



Opacity is the characteristic of paper that prevents printing on one side from showing through to the other. Opacity affects readability. High opacity helps readers concentrate and reduces confusion and eye strain, and also prevents photos, screen tints, or reverses on one side of a sheet from showing through to the other side. Many characteristics affect opacity. Generally speaking, thick paper is more opaque than thin, coated more opaque than uncoated, rough more opaque than smooth, and dark more opaque than light. Swatchbooks usually don't include opacity ratings; it is best for you to decide whether a sheet is opaque enough for the job by inspecting it rather than knowing its rating. You can increase opacity without increasing basis weight by using slightly darker paper. Often you can change from white to ivory or light gray without increasing costs, and this strategy might raise quality substantially in the case of a directory or catalog.

PROGRESSIVE GRAPHICS
Commercial Printers

2860 Crusader Circle, Virginia Beach, VA 23456 • (757) 368-3321 • (888) 948-2196 • Fax (757) 368-3421
General Email: csr@progressivegraphics.com • www.progressivegraphics. com

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A Solid, Versatile Sheet: COUGAR OPAQUE

Mills sometimes put fillers and chemicals in pulp to increase opacity and then add the word *"opaque"* to the paper's name. This is the case with Cougar Opaque, a sheet manufactured by Weyerhaeuser. Cougar is one of several *"opaque"* sheets on the market, and we at Progressive Graphics have found that it lives up to its reputation for high quality reproduction, excellent printability, and superb value. Cougar is a No. 1 uncoated sheet with a brightness rating of 94 and an opacity rating ranging from 89.5 to 97 depending on the basis weight. It comes in both smooth and vellum finishes, text and cover weight, white and *(in some weights)* natural colors.

On Projects That Fold: REDUCE CRACKING

The beautiful appearance of a printed piece can sometimes be marred if cracking occurs on the folds. Cracking may occur in either the paper or in the ink or coating, and here are some suggestions for dealing with each.

IN THE PAPER: When cracking is a potential problem, be sure your printer lays out your project on the press sheet so it folds with the grain of the stock being used. Grain direction is the predominant direction in which fibers in paper become aligned during manufacturing, and folding *"with" or "against"* the grain can make a big difference in terms of cracking. Indeed, grain direction is an issue which should also be addressed during estimating, since how a project is layed out *(or "planned")* can dramatically affect the amount of paper needed and thus the cost of the project. When folding coated papers, plan to rotary or die score on the fold; scoring is imperative when the job is laid out against the grain or when cover stock is used. Rotary scoring is less expensive than die scoring, but on very heavy papers and on cast coated stock, die scoring may be necessary. Progressive Graphics uses both methods.

IN THE INK OR (COATING): Use rotary or die scoring whenever the fold runs through an area of heavy ink coverage.

A FINAL NOTE: When a piece is die scored because the fold runs against the grain, it is important that it be folded soon after scoring. This is because the paper fibers affected by the score have "memory", and will return to their original *"cross grain"* alignment if the project sits too long before folding.

Software Available: PHOTOGRAPHIC PRINTS FROM VIDEO

From time to time our prepress department receives digital photos which have been extracted from video. Unfortunately, their resolution is often unsuitable or only marginal for use in printing. Though we haven't tried it ourselves, we are aware that a new software program called Video Pics from RedHawk Vision is now available. It is a plug-in for Adobe Premiere that lets you extract photographic prints from video. It creates clear images by capturing multiple frames of video, reducing noise, then enhancing color, detail and resolution. It creates more than three megapixels, suitable for printing full page images at 150 lpi. For more information, contact RedHawk Vision at www.redhawkvision.com.

The Tax Exempt Certificate: LOWER YOUR COSTS

If your printed project goes directly from your printer to a mailing house which delivers it "through the U.S. Postal Service or by common carrier at no cost to another person who becomes the owner of the printed material," then you don't have to pay sales tax on the project. Obviously, this can result in impressive savings on large projects. This regulation applies only to **"PRINTED SALES MESSAGES"**. These are defined by the Board of Equalization as "catalogs, letters, circulars, brochures and pamphlets printed for the principal purpose of advertising or promoting goods or services." *For more information about this important way to lower costs, ask for someone in the sales department when you call* ***Progressive Graphics*** ***at 757-368-3321.***

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General Email: csr@progressivegraphics.com

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