

PRINT PRODUCTION FOR DESIGNERS MANUAL

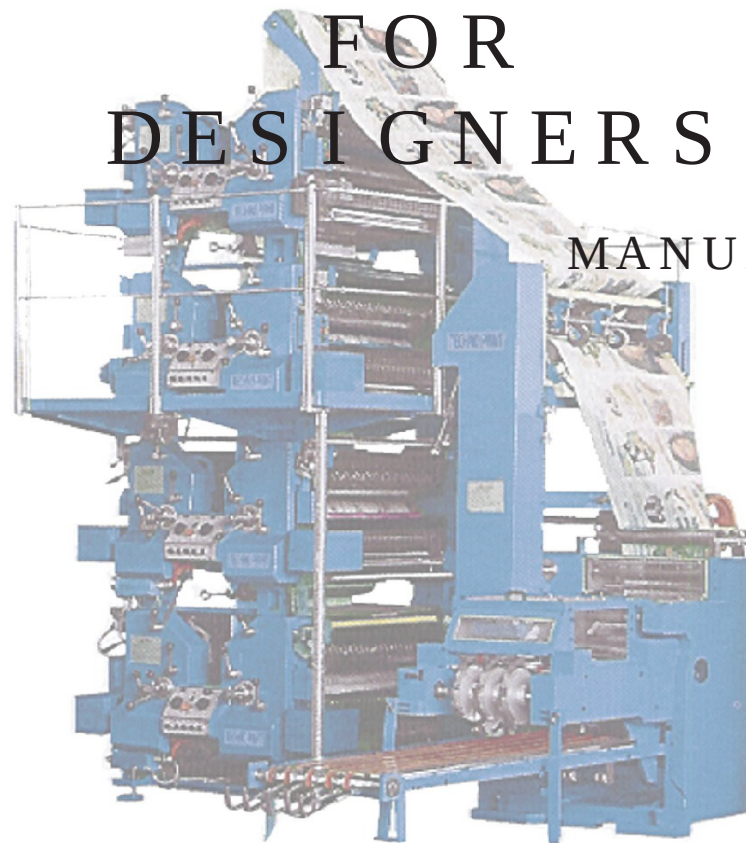
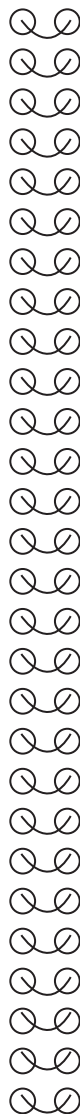




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PAPER

SECTIONS

1.1 TYPES OF PRINT COATING

1.2 WHAT COLOR PAPER SHOULD I USE



1.1

TYPES OF PRINT COATING

Coated Paper

This is paper that has been coated by a compound to give the paper certain qualities. These qualities include the weight of the paper, the glossiness of the surface of the paper, the smoothness and how well the ink is absorbed into the paper.

Coated papers have a smoother finish and it will take the ink longer to dry when printing on it. Photographers look for coated paper, depending on the project or the design, photos look better

on coated paper because the ink doesn't bleed and it doesn't blur the halftone screen. Details are not lost while using coated paper and the finer and delicate text holds up well on the paper

Keep in mind that it is sometimes harder to print photos and text on coated paper but choosing the right type will make the photos or the designs stand out. Coated paper comes in dull and glossy finishes

Uncoated Paper

This is paper that does not have any kind of coating like clay or latex. Uncoated papers have a natural feel to it and it has a rougher texture than coated papers. The ways that uncoated papers can be used are making newspapers, the less expensive magazines and catalogs and these uncoated paper are steadily available in a local copy and print shops

Uncoated papers are best for projects that do not need to be precise and if it needs to be rushed. And since there is no coating on this paper there is no glare to the reader's eyes. But the uncoated paper does absorb a lot of ink. Because of the natural texture of the paper the surface can be uneven.

Uncoated paper does dry faster since no gloss coat is blocking the fibers of the paper. Uncoated paper is easier to write and print on since the paper accepts lots of different inks.

If anyone is looking to print large quantity projects then uncoated paper is the better choice but if you are looking to do a higher end project or design then coated paper is the choice.

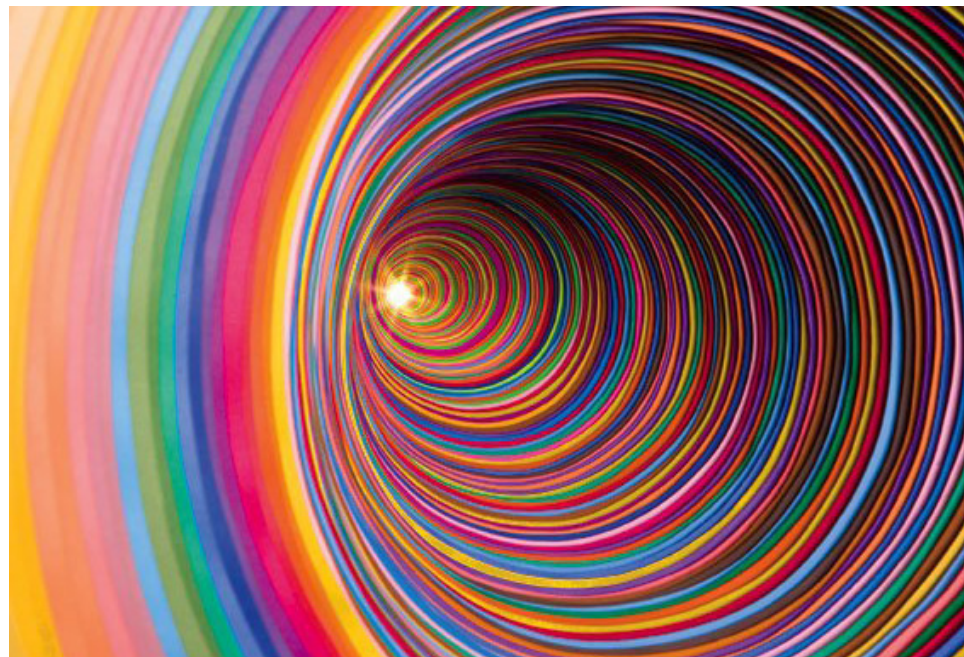
1.2 WHAT COLOR PAPER SHOULD I USE

What color paper should I use?

There are dozens of different colors of paper, especially white paper. There are shades that include hints of blue, cream and even yellow. It's hard to tell the difference sometimes of these colors on white paper but choosing the right paper can make all the difference in printing.

Depending on the color of paper that is chosen, will look different. If you are printing on a cream color stock the colors are going to have a warmer look to it. If on blue color stock, the colors will be on the cooler side and if there are highlights it will be the color of the paper.

If you are considering on using a color stock for your printing project, then keep in mind that it should be thought of from the beginning of the project and also print some samples, just



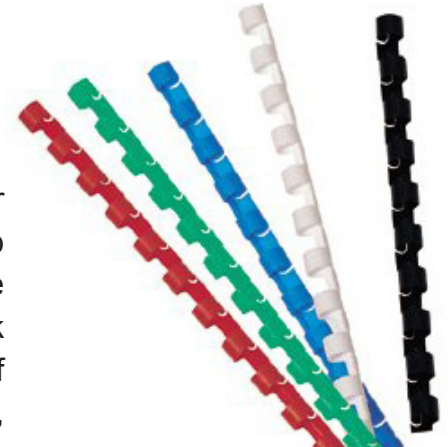
because you pick out a specific color stock doesn't mean that it will work out. Test and try different colors to see which one will be perfect for the printing project that you are doing.

BINDINGS

Different Types of Bindings

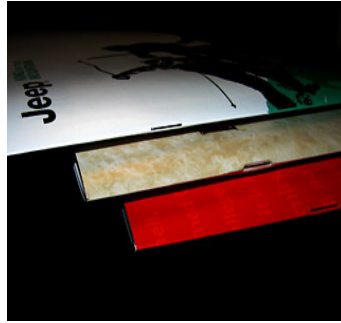
Plastic Comb Binding

This is the most popular forms of binding. Plastic comb bindings are inexpensive and are used to bind book very quickly. These types of bindings are used in schools, businesses and can be easily used in the home office. This is also good for large books over 400 hundred pages like cookbooks. Plastic comb binding can be used when the books needs to open and lay flat.



Saddle Stitch Bindings

This is where pages are folded together and then are attached together with a thin wire in the middle of the book. Generally two staples are used to keep the pages together. This type of binding is great for small book that don't have that many pages in it, it is also great for catalogs or calendars and other projects that are not too thick.



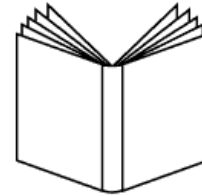
Perfect Binding



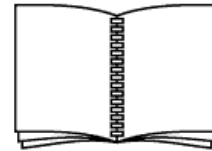
This type of binding is when the pages of the book are glued together instead of being stapled or any other way of binding. There are signatures that make up the book and are stacked together with the cover of the book and glued together. The glue gets into the notches of the cover and the paper and it is a more permanent way to bind the pages together.

Thermal Binding

This method of binding is a great way for binding hardcover and paperback books. This makes the book really professional looking. When using this type of binding strips of cloth are used with glue that is fused by heating it together and it is a very sturdy method that allows the book to lay flat.



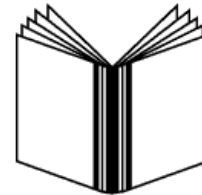
Hard Cover



Comb



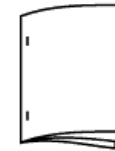
Saddle Stitch



Thermal Tape



Coil



Side Stitches
Two on margin



Upper Left



INK

SECTIONS

3.1 STANDARD PRINTING
INKS

3.2 SPECIALTY INKS

CMYK

To reproduce full-color photographic images, typical printing presses use 4 colors of ink. The four inks are placed on the paper in layers of dots that combine to create the illusion of many more colors. CMYK refers to the 4 ink colors used by the printing press -- the subtractive primaries plus black.

3.1

STANDARD PRINTING INKS

Web Offset Non-Heatset Ink

This type of non-heatset ink is the most commonly used when printing on web presses for newspapers and business forms. This ink is printed on uncoated paper stock so the ink could absorb into the paper quickly. And this ink should not be used on coated paper stock because the ink will not dry and the result would be smearing of the printed work.

Web Offset Heatset Ink

This type of ink contains varnishes that will help the ink to dry when heat is applied. These types of presses have heaters on them so when printing is being done it will dry. Because of the varnishes that are on the paper stock it is flammable, so great care must be taken into consideration when using this type of ink. But the advantage of using this type of ink is the printed product has a higher degree of quality.

Water-Based Ink

This has been around for a long time but it is not as used as much as the other types of ink like off-set ink. This ink maybe used more often because if the environmental laws that are coming into place, this water-based ink is safe to use. This ink is mainly in flexography and gravure printing.

Laser Ink

This ink is formulated to withstand the heat of a laser printer. The ink when used will melt in the laser printer because of the heat that is used. This might damage the printer but it is good for pre-printed documents such as invoices and statements.



3.1

SPECIALTY INK TYPES



Metallic Ink

To get metallic ink produced, metallic powders are mixed into the ink such as aluminum to create a silver look and bronze powder to make gold ink. This type of ink maybe hard to produce because the metals that are used cannot be filed fine enough and there might be large particles that are left which could get stuck in the printer.

Fluorescent Ink

This can provide a unique look to anything that is being printed. This ink can be use to print labels, posters and signs and of course the sign to warn people about hazards. But it using this ink, consider that



FLUORESCENT

this ink does fade quickly and should be kept out of direct sunlight. But other than that this ink will help people see what is being advertising.

Pearlescent Ink

This ink gives highlights to things that are being printed and also can provide a 3D effect to some printing projects.

Scratch and Stiff Ink

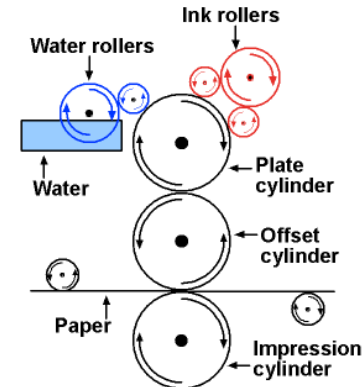
This is known as a microencapsulated ink. When the ink is scratched the fragrance is released. This is most commonly used in magazines for perfumes samples. But can be use for smelling food or something else that can be thought of.



PRINTING PRESS

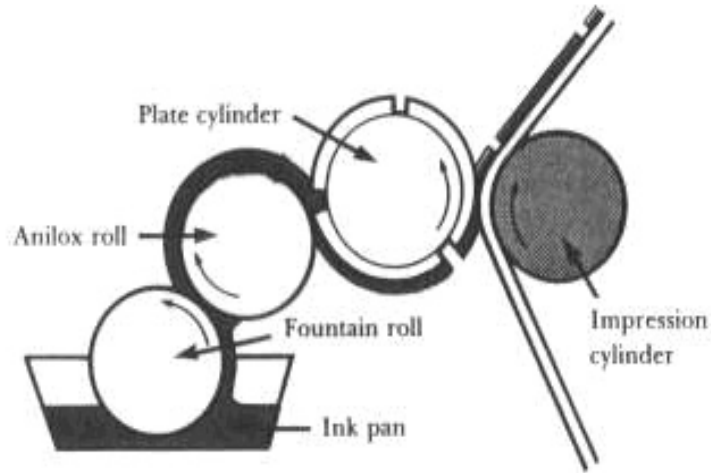
Offset Lithographic Printing

Lithographic is great for printing text and also illustrations. This type of printing is used for quick printing, printing newspapers and business papers. With this printing ink is not put on directly to a plate or cylinder. The ink is place on the plate then it is transferred to a blanket it forms the image that is going to be printed on the paper. There are three types of offset printing which are non-heated sheetfed, heatset and non-heatset web offset.



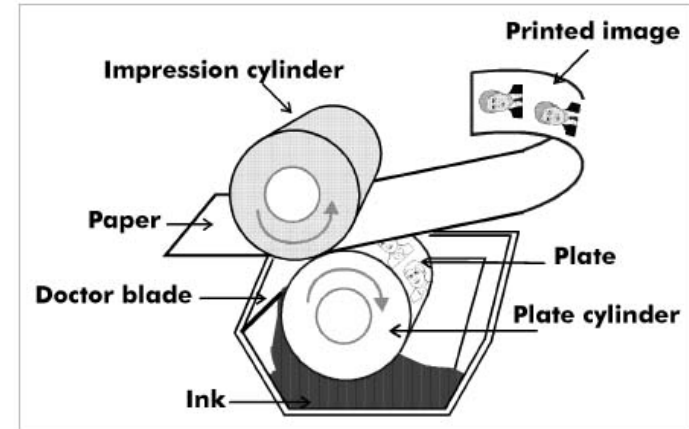
Flexographic Printing

This process is used to print packaging materials. Containers, folding cartons, paper sacks, plastic bags and disposable cups use this type of printing to print logos and text on these types of materials. With this process the image is printed on the **substrate** goes through the units and a different color is printed from a different unit. After the printing the substrate will go through some more operations before it is finished. The finishing can include coating, cutting, folding and binding.



Gravure Printing

This is a process that involves engraving the image onto a copper cylinder. It prints on rolls of paper rather than sheets of paper. There is a cylinder that rolls in the ink; each cylinder has a different color ink, there is a **doctor blade** that removes the excess ink, then the paper get in between two cylinders and the image is transferred onto it. While this is happening the cylinder applies a lot of force to put the image on the paper. The paper goes to the dryer and completely dry before it goes through the process again with a different color.



GLOSSARY

B

Bleed: make an image extend beyond the trim line

C

Case Binding: A mass-produced, machine-bound book, with a case rather than a cover, not a true binding style, but sometimes imitated by the craft binder.

Coated Paper: Type of paper coated with white clay or a similar substance to provide a smooth surface for printing detailed illustrations. The finish is often glossy but can be dull.

Comp: a layout that has been mocked up to show how the different elements of the design will look when

the job has been printed. This could range from a rough sketch, to a fully formatted digital layout or printed proof.

Crop Marks: Cropmarks or Crop marks are a means through which sub-surface archaeological, natural and recent features may be visible from the air or a vantage point on higher ground or a temporary platform

CMYK: The CMYK color model (process color, four color) is a subtractive color model, used in color printing, and is also used to describe the printing process itself. CMYK refers to the four inks used in some color printing: cyan, magenta, yellow, and key black

D

Doctor Blade: A metal knife that cleans or scrapes the excess dye from engraved printing rollers, leaving dye paste only in the valleys of engraved areas. Also used to describe other blades that are used to apply materials evenly to rollers or fabrics

F

Finished Size: size of printed product after all operations

Flexographic Printing: a machine printing process that utilizes rollers or cylinders with a flexible rubber-like surface that prints with the raised area, much like surface

Fluorescent Ink: Naturally bright inks that reflect and emit light making use of UV light waves, which other inks cannot take advantage of.

Folding Dummy: A sample of the final printed product folded and assembled. Can be made to actual size or in miniature
Fold Marks: Markings that show where a piece will fold when finished

G

Gravure Printing: a printing process by which the depressions in an engraved roll are filled with ink, the excess being wiped off by a doctor blade. Ink remaining in the depressions is deposited on a flexible film as it passes between the engraved roll and the back-up roll

Gutter: inner margin of book opening, occurring between left and right pages

H

Halftone Screen: technique used to create the dots on a photograph so it can be printed. The number of lines to the inch controls the coarseness of the final dot formation. The higher the quality the more lines can be used.

L

Line Breaking: In text display, line wrap is the feature of continuing on a new line when a line is full, such that each line fits in the viewable window, allowing text to be read from top to bottom without any horizontal scrolling.

Lithographic Printing: A printing method that uses the repellent properties of oil and water to reproduce an image on a flat surface. The process originated with the practice of drawing on stones (lithography comes from the Greek word for "stone writing") with an oil-based crayon and then wetting the stone

M

Metallic Ink: Uses powders such as aluminum and bronze with a varnish base - to produce images with luster.

P

Paper: Paper is a thin material mainly used for writing upon, printing upon or for packaging. It is produced by pressing together moist fibers, typically cellulose pulp derived from wood, rags or grasses, and drying them into flexible sheets

Perfect Bind: trim/grind off spine-edge and glue the pages into their cover

Plastic Comb Binding: A means of mechanical binding in which the pages are bound together by means of a plastic comb. This comb consists of a plastic strip off which extend a series of curved plastic prongs, which are inserted into drilled or punched holes along the binding edge of the pages.

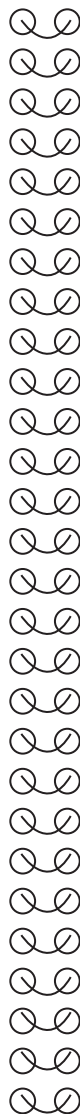
S

Saddle Stitch: Saddle stitch staplers or simply saddle staplers are bookbinding tools designed to insert staples into the spine (saddle) of folded printed matter such as booklets, catalogues, brochures, and manuals.

Spiral Binding: A method of binding using either plastic or metal spiral through circular holes in the paper allowing the book to open flat.

Smyth Sewing: A method of fastening side-by-side signatures so that each is linked with thread to its neighbor, as well as saddle sewn through its own centerfold. Smyth-sewn books open flat. The stitching is on the back of the fold.

Substrate: Substrate is a term used in converting process such as printing and Lamination or coating as a more general term to describe the base material onto which e.g. images will be printed and to be laminated as per the packing specification required for the product



T

Thermal Binding: uses a one piece cover with glue down the spine to quickly and easily bind documents without the need for punching.

Trim Marks: marks towards the edge of the sheets showing the guillo operator where the invisible trim line is

U

Uncoated paper: Paper that is free of any applied coating to either side. These papers are available in a variety of colors, weights, and finishes (laid, smooth, vellum, writing).

NOTES

