Litho NOTES

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SPECIALTY INKS

Fluorescent ink. Extremely brilliant and reflective, fluorescent inks make color pop like nothing else can. They're the only inks that convert ultraviolet light waves to visible rays, which accounts for their shine.

Overall, fluorescent are easy to use, but two things to think about are ink density and permanence.

A heavier film of ink makes fluorescent colors more intense, so you'll want to lay down as much ink as you can. While recent advances in the formulation of fluorescent inks have given them more pigment strength, you may still need two passes of ink to build up the intensity you need.

Because you'll be using heavy ink, watch out for fine type or rules running below large solids, fine screens and halftones. Dot gain can be excessive, so they may ink up.

Fluorescent inks fade over time, particularly if exposed to sunlight, so they're best for jobs that won't have a long life. If you're using them in a situation where they're likely to fade, try printing a dark color around them. That way when they fade the image will still be visible.

White coated paper works best with fluorescent, although they can be mixed with offset inks for good results on uncoated paper.

Metallic ink. Metallic inks exhibit a phenomenon called leafing, where small metallic particles float to the top of the ink and form a thin layer that creates the metallic luster. This is what creates the shinney effect of metal, but can also make these inks more prone to scratching and flaking.

To prevent that, you can apply a varnish over the metallic ink. A gloss varnish will preserve the luster best. Otherwise, you should take special care in collating, trimming and binding to prevent scratching the metal.

Other tips for using metallic inks:

When screening a metallic color, use middle range screen values.

Light screens tend to lose some luster and dark ones can fill in.

Make sure that the fountain solution isn't too acidic, which can tarnish the metal.

Allow as much drying time as possible. Oxidizing systems often are slowest.

SAFETY

Material Safety Data Sheets (MSDS). When it comes to following the rules, printers, prepress shops, suppliers and manufacturers are in the same boat. All parties are liable and responsible for ensuring compliance with federal, state and local environmental regulations.

With respect to complying with rules concerning MSDS, printers can get help from both the supplier and manufacturer so as to minimize the time spent on environmental compliance.

Prepress departments are affected greatly by MSDS issues because they consume large volumes of chemicals. And though the MSDS protocol is beginning to sound like a broken record, it's worth going over once more.

Material Safety Data Sheets were developed by OSHA as a way for manufacturers to summarize information about the health hazards of substances in the work place. MSDS form the foundation of the written portion of a Hazard Communication Standard program.

These information sheets are required to be on site for all products stored or used on site that are classified as hazardous. They must be available to employees in the shop, and it is a good idea to post a conspicuous sign informing employees as to the location of the MSDS file. You should review MSDS files at least annually. If a MSDS is three or four years old, request a new and updated sheet from your supplier. It's the manufacturer, distributor and shop supervisor's responsibility to make sure that information on the MSDS accurately reflects the scientific evidence used in making the hazard determination.

If any of these parties learns any new information regarding the hazardous chemical, such as new ways to protect against harm, the new information must be added to the MSDS within three months. The essential part of this is having the most detailed information available to employees to minimize the dangers associated with hazardous chemicals.

Unfortunately, there is no standard governing the set-up of a MSDS. This has led to confusion as one vendor puts a category in one place and another puts it in a different spot. Currently there is talk of standardizing the MSDS to make it more easily understood, but nothing has been agreed upon yet.

As a rule, MSDS are generally divided into eight categories: product information; physical and chemical characteristics; hazardous ingredients; flammability; reactivity; toxicity; precautions for safe handling and control measures. Despite the variations in MSDS, these categories should appear on the sheet.

A MSDS file should be used only as a first step in any investigation of hazards in your shop, because the sheets can be incomplete, inaccurate or out of date. Since MSDS are written primarily for chemists and engineers, the language is often cryptic and difficult to understand.

Training is a good way to help your shop personnel decipher MSDS and become more knowledgeable about potential hazards and ways of minimizing them. It's also a vital component for compliance with the Hazard Communication Standard provision of OSHA.

DESKTOP PUBLISHING

Halftoning images. PostScript halftones are somewhat different from the halftones used in traditional printing. In the PostScript model, a grid is created, and its fineness is based on the line screen frequency (lines per inch (lpi)) that you select. Within each cell in the grid, the program (such as Photoshop) can create a halftone dot that reflects the frequency and level of the color at that location. Depending on the resolution of the imagesetter (dots per inch (dpi)), up to 256 levels (dot sizes) can be created. Note that PostScript halftone dots vary in size but are fixed in position on the grid.

When you are recreating a photographic image on the page using halftones, the bitmap image created by a scanning device is used to generate the halftone screen. The amount of information scanned in, measured in pixels per inch (ppi), is therefore critical to eventual image quality. After some experimentation, it has been determined that you get the best results if you have two times as many ppi in the scan as there are lpi in the output. This relationship guarantees that there is enough color information available to make a reasonably accurate halftone dot. It also ensures that pixels are small enough not to be visible (as many as four pixels can exist in the same space as one halftone dot). If you are planning to resample (reduce or enlarge) the scanned image, keep in mind the new image may lack the quality of the original scan.

Experience has shown that, when scanning, higher ppi readings do not necessarily improve the final output quality. They do, however, use up more storage space. It is a good idea to plan your page and image sizes before scanning to get the best possible images at the lowest cost in file size and output processing time.

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PLATEMAKING TROUBLESHOOTING

Correcting excessive dot gain. If press roll-up reveals a mottled or plugged screen (hidden halation) or full halftone dots, check for the following:

* Excessive ink
* Soupy ink
* Dirty dampeners
* Heavy ink form roller-to-plate setting

If the above conditions are satisfactory, use the following procedure to correct the problem on the press using a cleaner conditioner.

1. Wash ink from the plate with a mild solvent.

2. Apply a small amount of cleaner conditioner using a press rag or cheesecloth, then rinse off thoroughly. Use of too much cleaner conditioner lowers its effectiveness because of excessive lubrication of the plate's surface.

3. If the problem still persists, use a scratch remover or remake the plate. **Note:** Scratch remover is an abrasive agent and may reduce the image life. If allowed to dry on the plate, scratch remover causes blinding and will require hot water to remove.

Desensitizing pits and scratches. Scratches or pits in the non-image area of the plate are repairable. Use the following procedure to correct defects that accept ink:

1. Moisten a clean cotton pad with scratch remover and rub affected area in the direction of the scratch or abrasion. To prevent unnecessary loss of image life, treat only the affected area "not the plate image."

2. Wash the treated area with fountain solution or plain water. Regum the plate if it is not to be used immediately.

3. Do not allow scratch remover to dry on the plate image or blinding will result.

If scratching is caused by dirt, dried ink or metal particles in form rollers, clean rollers thoroughly to prevent reoccurrence of the problem.

MANAGEMENT

Problem solving is the challenge of management. Because a manager has the title and office, he is expected to accept and solve all the shop's troubles. It's a great feeling to be so needed, so trusted. The position would really be comfortable if only problems were not problems.

Many problems at first may seem without solution. Analysis, thinking the subject of the problem through, will provide some answeres. There is a logical approach to problem solving and if the formula is followed it will lead to some form of decision making.

Let's consider first the fact that all problems evolve around one word. That important word is **change**. If all has been going well and a problem shows up, something or somebody has caused change. So to get a handle or some identification of the problem, hunt for what has changed, what is different.

Questions require answers, so ask questions to identify the problem and its cause. What is different? What or who precisely is being affected? What is involved? When did the problem start? What happened at the point when the problem was first noticed? What is being done differently?

When the likely source of the problem has been identified, it is wise to double check with some more questions. If this problem is being caused by this change, what will correct it? Is the answer and course of action clear of other problems? Why was the problem-causing change implemented?

Sometimes problems may seem to develop from lack of change. More production is expected but the equipment or people have not been up-dated. Workers have accquired a boredom factor from routine. The problem is still change but more changes will be required if a solution is to be found.

When change is to take place the wise manager is already anticipating problems and will have answers ready when they are needed. Develop a plan for change. Anticipate what might go wrong. Will the problems be people or mechanical? What will be the people reactions in the shop? Outside the shop? If additional equipment or supplies may be required, justification and costs should be worked out prior to making the change.

When the change has been implemented and things go wrong don't just look for what is bad, determine also what is working good. Then determine what has happened and where the problem areas are. Problems are difficult to deal with as statements. When the problem has been identified restate it as a question. What must be accomplished? What will be the best steps to accomplish the objective? Then select the most trouble-free course of action, with the alternatives as a reserve force if disaster shows up again.

Problem solving is a thinking situation. It is always nice, and a display of managerial skills, if a problem can be worked out in a stand up, head-to-head situation on the department floor. But is is far safer, and much more sure, if the manager falls back to his office and works the situation out first in his mind—then on paper. Too many mistakes creep in during hasty, on-the-floor problem solving.

VENTURA DTP TIPS

The "Add a Frame Tool" has three primary purposes:

* Add new frames to an existing layout. This allows you to place text and pictures wherever you want.
* Block text from flowing into unwanted areas of the page. This is particulary useful for constructing runarounds, where text is made to flow around an irregularly shaped object.
* Add additional space between lines or paragraphs.

Shortcuts

FUNCTION	KEY
Copyright mark ©	Ctrl + Shift + C
Discretionary hyhpen	Ctrl + -
Em dash —	Ctrl +]
Em space	Ctrl + Shift + M
En dash –	Ctrl + [
Figure space	Ctrl + Shift + F
Non-breaking space	Ctrl + space
Quote, open "	Ctrl + Shift + [
Quote, closed "	Ctrl + Shift +]
Registered trademark ®	Ctrl + Shift + R
Thin space	Ctrl + Shift + T
Trademark ™	Ctrl + Shift + 2

Glossary

Discretionary Hyphen. A hyphen placed in a work, which only prints if the work appears at the end of a line. Used to add hyphens beyond those produced by the hyphenation dictionary. Discretionary hyphens always take precedence over any hyphens inserted by Ventura Publisher.

Tag. The format applied to a particular paragraph using the Paragraph tool. Tags are stored in the style sheet. The Tags list window shows all tags available in the currently loaded style sheet.

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