

A Guide to Laser Papers and Printing

The hot dry environment of the laser printer is vastly different from the conditions associated with the litho operation. To cope with these demands, laser printers have a lower moisture content than standard printing grades. This is to ensure good imaging and to minimise sheet distortion when the paper is subjected to heat to fuse the image. It is therefore essential that certain guidelines and precautions are observed to ensure the optimum results at the laser printing stage. We therefore make the following recommendations.

Design layout

- 1 Pre-printed image should avoid heavy solid areas and dense half tone where the reverse is to be laser printed.
- 2 Design layout should provide a long grain A4 sheet when material is to be used on a page printer.

Pre-printing

- 1 Material should be allowed to condition to the press room temperature prior to removal of the wrappers. As a guide, 10 hours should be allowed for every 10°C difference in temperature. The material should only be unwrapped immediately prior to the first conversion process. It is essential to protect material from absorbing or losing moisture between processes, by covering the stacks with moisture-proof wrappers, plastic sheet, stack covers, stretch film, etc.
- 2 It is essential to supply material to the printer in as flat a condition as possible. If a slight curl is present, it is important that this is in the cross direction and away from the side to be printed first.
- 3 Special laser compatible or fully oxidising inks should be used. Metallic laser compatible inks are available. Consult your ink supplier.
- 4 The press damping solution should be kept to an absolute minimum and alcohol used if possible.
- 5 Use little or no anti set-off spray powder. If spray powder is necessary then a vanishing grade is more suitable.
- 6 If the material is to be guillotined after printing, it is essential to use a sharp knife in order to avoid burred edges and debris. Cutting accuracy should be +/- 1mm.
- 7 When perforating it is advisable to use micro-perforators where possible. It is also essential that paper drills and sprocket punch tools are sharp in order to minimise debris and burring.
- 8 Standard thermographic print is unsuitable for laser printing. However, specialist laser compatible thermographic print services are available.
- 9 If the material is to be hot foil blocked, laser compatible foils must be used.
- 10 Pre-printed and converted material should be moisture-proof wrapped to ensure that it cannot absorb or lose any moisture between the litho printer and the laser printer.

Laser printing

- 1 It is recommended that as much time as possible is allowed for the inks to fully dry after pre-printing and before laser printing.
- 2 The moisture-proof wrapped material should be allowed to condition to the temperature of the laser printing environment. The material should remain wrapped until required for lasering. Any unusual material should be resealed in its moisture proof wrapper.

The above information is intended to provide assistance when producing material which is laser guaranteed and to be subsequently laser printed.

Many standard printing grades have been found to work on laser printers. It is always recommended that a trial is conducted on the machine to be used for the laser printing.

For any additional information, clarification or assistance please contact Robert Horne Technical Services.