Pre Press technical sheets

An in-depth look at all the varnishing options

Machine Sealing

A machine seal is a basic, and virtually invisible coating, which is applied to a printed item by the printer. It does not affect the appearance of the job, but as it 'seals' the ink under a protective coat, the printer need not wait so long for the job to be dry enough to handle. It is often used when producing fast turnaround printing such as leaflets on matt and satin papers, as inks dry more slowly on these materials.

Varnish

Varnish or print varnish is a clear coating that can be processed like an ink in (offset) presses. It has a similar composition to ink, but lacks any colour pigment. There are three basic types

Varnish: A clear liquid applied to printed surfaces for looks and protection.

UV coating: Liquid laminate bonded and cured with ultraviolet light. Environmentally friendly.

Aqueous coating is water based but expensive. Environmentally friendly.

Varnish is the least effective way to prevent scuffing. It is essentially ink without pigment. It requires its own printing unit on press. It is normally printed in-line as the other colours are laid down, some printers dry-trapped (run as an additional pass through the press after the initial ink coating has dried). The latter often provides a glossier finish. Varnish comes in gloss, dull, and satin and can also be tinted by adding pigment to the varnish.
You can treat varnish as a colour playing gloss varnish off against matt to give subtle effects, you can even highlight specific areas on a page such as a title.

UV Coating

UV Coating is a clear liquid spread over the paper like ink and then cured instantly with ultraviolet light. It can be a gloss or dull coating, and can be used as a spot covering to accent a particular image on the sheet or as an overall (flood) coating. UV coating gives more protection and sheen than either varnish or aqueous coating. Since it is cured with light and not heat, no solvents enter the atmosphere. However, it is more difficult to recycle than the other coatings.
UV coating is applied as a separate finishing operation as a flood coating or (applied by screen printing) as a spot coating. Keep in mind that this thick coating may crack when scored or folded.

Aqueous Coating

Aqueous coating is more environmentally friendly than UV coating because it is water based and does not crack or scuff easily. Aqueous is very expensive. Since it is applied by an aqueous coating tower at the delivery end of the press, one can only lay down a flood aqueous coating, not a localised "spot" aqueous coating. Aqueous comes in gloss, matt, and satin.

Laminate

Laminates come in two types: film and liquid, and can have a gloss or matte finish. As their name suggests, in one case a clear plastic film is laid down over the sheet of paper, and in the other case a clear liquid is spread over the sheet and dries (or cures) like a varnish. Laminates protect the sheet from water (including perspiration from the hands) and are therefore good for coating items like menus and book covers. For more money, one can even specify a porous, lay-flat laminate (the interior of which is covered with numerous "V"-shaped cuts in the plastic that minimise the "curl" one often sees on paperback book covers due to moisture seeping into the uncoated side and causing it to expand). Laminates are slow to apply and costly but provide a strong, washable surface.