

Printing on Specialty Stocks

Sooner or later every printer is asked to print on a specialty stock such as metallic foil, vinyl, polyester or acetate. It is possible to print these stocks on a duplicator press and it can be very profitable, but there are pitfalls and not all specialty stocks can be printed by offset. The printer must use special inks and different press techniques to be successful. The following can help you produce profitable, quality printing from the start:

Stocks:

Not all stocks can be printed by lithography. For example, some vinyls contain plasticizers which will ooze to the surface and prevent ink drying. Offset printable vinyls have a topcoat which seals in the plasticizer and permits offset ink adhesion. To test a stock before committing to a production run, tap out a film of ink on its surface. Put it in a telephone book to simulate overnight pile drying, and check it in 24 hours for drying, adhesion, scratch resistance, etc. If the ink dries to a hard, scratch resistant surface you can probably print it on a duplicator press.

Inks:

Use an ink such as Van Son Tough Tex which is formulated to dry completely by oxidation and contains adhesion promoters that will bind the ink to a wide variety of non-porous stocks.

Fountain Solutions:

For best results, use an alcohol or alcohol substitute based fountain solution. Do not use electrostatic fountain solutions as many contain antioxidants that will seriously affect ink drying and adhesion. A good fountain solution mixture would be 26 oz distilled water, 2 oz of fountain solution and 4 oz. of alcohol. If using an alcohol substitute such as ABDick Suredot® Alcohol Replacement (4-1275), only 1 oz. per quart is needed.

pH:

Tough Tex inks should be run at the same pH or conductivity as regular inks. A pH of 4.5 and 5.5 with a conductivity reading between 800 and 1200 micromhos above the reading of straight water would be fine. If the pH drops below 4.5, the increased acidity can slow down ink drying dramatically.

Press Technique:

The ink/water balance when printing on non-porous stocks is more critical than when printing on regular paper stocks. Non-porous stocks absorb virtually no water and therefore very little water is needed. The plate requires only enough water to keep the plate surface wet. Any more will only cause drying problems. Similarly, too much ink will cause drying and set-off problems. Use only enough to achieve required color. To further optimize drying, you may want to use spray powder, which will keep the sheets separated, and allow air to penetrate the pile of stock.