SYNAPS OM90F is a synthetic paper based on a high grade polyester. It is coated 2-sided with an ink receptive layer. SYNAPS OM90F has no grain direction.

**Printing**

SYNAPS OM90F is suitable for offset, HP Indigo (sheet fed) and flexo printing. It is also suitable for UV curable inkjet printing. It is not suitable for non-UV inkjet printing. It is also not suitable for electrophotographic (dry toner) printing.

**Offset printing recommendations**

No special inks are required. No special drying agents to mix with the inks or fountain solution are recommended. For the best results consult your ink supplier.

Recommended densities (measurement on wet print, white backing) for process inks on SYNAPS OM90F are: K: 1.50 – C: 1.20 – M: 1.15 – Y: 1.20.

For printing pantone colours or other spot colours, use the (pantone or spot) colour sample book for uncoated paper as a reference. When the printed job needs to be finished with a dispersion lacquer or a varnish, we recommend printing lower densities, because the printed densities will increase with 0.10 to 0.20 (typically) when dispersion lacquer or varnish is applied.

Note: too high ink densities must be avoided, to prevent drying and finishing problems.

SYNAPS OM90F will feed like coated paper. For optimum press feed reliability, ensure that sheets are aired (fanned) prior to printing.

**Important!** To avoid marking, minimize pressure of suckers and feeder-board wheels/brushes or move them outside the print area if possible.

SYNAPS OM90F has a very smooth surface. Only minimal squeeze (0.05 - 0.10mm) is required to ensure uniform coverage. No intensive powdering is required. The ink sets very fast on SYNAPS OM90F.

With heat drying systems adjust temperature taking into account the heat sensitivity of the film. Pile temperature should not exceed 40 °C (104 °F).

**Varnish or aqueous coatings**

SYNAPS OM90F can be overprinted with varnish or aqueous coating (preferred choice). **Important!** Always test before deciding to use SYNAPS OM90F for a specific job!

**HP Indigo printing**

SYNAPS OM90F is compatible with HP Indigo sheet fed presses.

SYNAPS OM90F can be used for variable data printing with very good printing results. For very long production runs, experience learns that the blanket needs to be replaced sooner compared to paper printing. Adjusting the blanket temperature up to a level just high enough to dry the HP Indigo ElectroInk will extend the lifetime of the blanket.

**For best wet scratch resistance**

SYNAPS OM90F is more sensitive for scratching when the printed substrate is wet. Wet scratch resistance can be improved with a dedicated overprint water based dispersion lacquer. Agfa recommends Actega Terrawet Barrier Coating G 9/523. The thicker the lacquer layer, the better the wet scratch resistance (a thick layer can also be obtained by printing multiple layers)!

Always test on beforehand for critical jobs.

**Converting and finishing**

**Guillotining**

Use sharp and clean blades. Do not cut lifts higher than 5 cm (2 inches).

After guillotine cutting, we recommend to air SYNAPS OM90F in order to prevent hooking of the sheets on the cut sides.

**Die cutting**

Use sharp hard steel blades with rounded inner corners. Avoid inside die-cuts less than or equal to 90 degrees. Keep retention points small and few. The best results are obtained on cylinder type presses. Platen type presses are less suitable especially for complex die cut shapes.

Always do a test before deciding to use SYNAPS OM90F for a specific die cut job.

**Drilling**

Use sharp and clean drill bits. Drills have to be free of nicks. Use short dwell times during drilling to eliminate heat generation. Don’t drill too high lifts. Recommended drills are steel drills coated with Teflon (to prevent sticking). If possible, lower the speed of the drills to prevent heat generation.
Intermediate spraying on the inside and the outside of the drill with ‘dry silicone spray’ or intermediate drilling in wax paper (lubrication inside the drill bits) will facilitate drilling and will extend the life and sharpness of the drill significantly. The best results are obtained with drilling equipment that have drill bit lubrication and drill bit cooling.

**Laser cutting**
Laser cutting works well. The power of the cutting device needs to be adjusted according to the thickness of the substrate.

**Rolling trimmers/cutting plotters**
Rolling trimmers work well with SYNAPS OM90F. Always test on beforehand.

**Folding and scoring**
Please consult ‘recommendations for folding SYNAPS OM90F’ on our website for more specific information. 
**Important!** Given the fact that SYNAPS OM90F is a synthetic substrate, it has different characteristics compared to paper and some other synthetics so we recommend to perform a folding test before deciding to use SYNAPS OM90F for a specific job!

**Book finishing**
SYNAPS OM90F is a perfect material for Wire-O®, Unicoil-Spiral© and comb binding. Use round holes to avoid tearing.
SYNAPS OM90F is also perfect material for production of ‘perfect binding’ books (with PUR or EVA (hotmelt) glue).
For ‘perfect binding’ book covers, we recommend applying a top coating on SYNAPS OM to avoid scratching or guillotine pressure markings and we recommend to use SYNAPS OM up to OM170 as thicker SYNAPS OM is prone to cause cover gapping on the book spine.
**Important!** Always do a binding test before deciding to use SYNAPS OM90F for a specific job!

**Perforating and spiral binding**
SYNAPS OM90F can be perforated. Keep hole punches sharp and clean.

**Stitching**
SYNAPS OM90F is not suitable for applications where stitching is used as the irregular punches from the needle(s) can promote tearing of the substrate.

**Laminating**
SYNAPS OM90F can be laminated with PET/PE film and OPP film. The operating temperature should not exceed 120 °C (248 °F).
Tests with PVC film were not successful.
Always do a test before deciding to use a SYNAPS OM90F for a specific lamination job.

**Hot foil stamping**
Hot foil stamping is possible.