



SYNPLAS **PRINTING RECOMMENDATIONS**

SYNPLAS is a synthetic paper suitable for printing by all popular printing methods:-

Offset, Screen, Flexo etc. The following information has been produced as a guide to using this material, with particular reference to Litho Printing .

SYNPLAS SPH and SYPH have very good tear resistance in both directions. The sheets are coated on both sides to accept conventional inks. When printing litho, oxidising inks will decrease drying time.

SYNPLAS SPA, SPC, SPCT, and SPCD have very good tear resistance in one direction only. The heavier weight sheets will offer good tear resistance in the other direction also. These sheets have **no** coating and can be printed using oxidising inks.

Inks are available today that are dried by IR or UV lamps. (see notes under "Inks" Overleaf)

PRE-PRINT

- Unwrap **SYNPLAS** just prior to printing
- Due to the synthetic nature of the material care should be taken to avoid the build-up of static.
- Relative humidity of pressroom should be between 50 and 60%
- Make Ready on the same material that the job is being printed on.

SHEET TRANSFER

Care should be taken to control static, particularly under conditions of low humidity. Static can be eliminated by the use of tinsel or ionizing bars. However the most effective solution is to maintain Relative Humidity at 55%. Please note that in cold weather conditions during frost or snow humidity will be low. The operation of warm air heaters in print rooms will decrease the RH further.

LITHO DAMPENING

- **Do not use** settings as you would for paper (where the fibres absorb the fount solution from the blanket). This does not happen when printing on plastic material
Due to the low absorbency of **SYNPLAS** material damping must be kept to an **absolute minimum** – excess water will greatly retard ink setting increasing the drying time.
- Do not use normal fount solution. Proprietary fount solutions contain wetting agents/buffers/hydrocarbons that should not be used.
- pH value suggested 5.5-6.0
- A mixture of water and 10%-15% isopropyl alcohol should be used. This will have the highest contribution in the reduction of drying time.

INKS

SYNPLAS SPH and **SYPH** grade has a coating that will accept conventional inks, however, this will lengthen drying times considerably compared to oxidizing inks which are recommended for long runs or where solid print areas are present.

- **SYNPLAS SPA, SPC, SPCT, and SPCD** grades would normally require oxidizing inks.
- Inks that are dried by IR or UV curing processes are also available for printing of Synplas which will greatly assist drying.
- Light fast inks should be specified for long-term exposure to daylight.
- Use minimum ink – ink rests on the surface and is not absorbed as with paper. As a guide use 30%
Less ink
- **For best results contact your ink supplier for further advice on printing on synthetics**

DRYING



- Use a non-vanishing spray powder of 20 microns plus; it is recommended a smaller quantity of a larger size (30 micron) is used.
- It is recommended that printed stacks are kept to a height not exceeding 250 sheets – it is suggested a pallet racking system is used. (See photo above)
- When using forced drying methods heat must be kept to a minimum to avoid distortion of the sheets.

GUILLOTINING/ DIE CUTTING

- Work must be fully dry before further processing
- Blades and cutters **must** be sharp
- When Die-cutting avoid acute internal angles that may cause a weakness to the material. Rounded shapes are preferable.
- Due to the synthetic nature of the material care should be taken to avoid the build-up of static

SYNPLAS comes in many thickness varieties and widths. It can be punched, stitched, eyeleted and glued. Self-adhesive material is also available on request.

All Synplas products have a closed cell structure so 30% less ink is required because ink rests on the surface, giving a more vibrant image.

SPH &

SYPH :- White matt surface. Extruded – 5 layers – core made up of 3 layers of foamed film and two solid outer layers.
Coated to accept any offset inks, high opacity, brighter white, flexible, lightweight

SPA:- White matt surface. Calendered – single layer – no coating –. Heavier and more rigid than SPH

SPC:- White matt surface. Calendered – heavier grade, single layer, uncoated. Same print surface as SPA.

SPCT : White matt surface. Calendered – uncoated. Same print surface as SPA and SPC.

SPCD: White matt surface. Calendered – uncoated. The tear strength of SPCD is better than SPA, SPC and SPCT.

SPG:- White matt surface. Coated one side only for printing. The uncoated side is suitable for the application of adhesive coatings. 54,65,75, and 95 micron thicknesses. Mainly for label stock.

The above information is produced as a guide only.
Testing prior to running a job is highly recommended.