

## A Guide to Printing Polyart

Polyart is a silk coated synthetic substrate. It has a coating on it similar to that of most Silk/Matt coated papers and is suitable for most printing processes. Litho printers should handle and print it as a Silk/Matt coated material.

### Lithographic printing

#### Printing

Normal inks for Silk/Matt coated materials that dry by oxidation/penetration are suitable for simple line and tone work. Where close register multi-colour work is involved, the use of standard inks may give rise to unacceptable print distortion, especially on the lower weights of Polyart. In these cases it is recommended that special inks that are essentially free of mineral oils and dry entirely by oxidation are used. Some slight distortion is almost unavoidable with heavy ink weights. Best results for multi-colour work is obtained with a single pass through multi-colour presses. Aqueous coatings provide excellent results.

#### Damping

This should be reduced and maintained at the lowest possible level with the pH no lower than 5.5. The use of the cobalt acetate drying additive can be an advantage; excess fount will retard or prevent the ink drying. Other fount additives can be used but these should be reduced to 50% of the manufacturer's recommendations. The printing of Polyart on small offset machines which incorporate an integrated damping system is not recommended.

#### Spray powder

Always use a non-vanishing spray powder.

#### Stack heights

These should be reduced to allow for the ink oxidation process to occur.

#### UV Litho printing

UV cured inks and varnishes print satisfactorily, but check with your ink supplier to confirm compatibility. Control the temperature of the lamps to avoid overheating and distortion.

#### Screen printing

Using a fine mesh screen and light ink films gives the best results; avoid overheating when drying. Aromatic solvent thinners may distort the surface, so should be avoided. It is best to contact your ink supplier for suitable ink.

### Finishing and subsequent processes

#### Folding

Polyart can be folded like paper of a similar bulk on normal folding machines. The folds may be slightly springy.

#### Guillotining

It is recommended that 48 hours is allowed after printing before cutting. Light clamping pressure should be used otherwise slight sticking on the edges may occur. This can be alleviated by fanning or breaking.

#### Punching, drilling and perforating

Tools must be sharp and the dwell times kept short to avoid fusing of the material from the heat generated. As Polyart is stronger than conventional paper, large tie area is not required when perforating.

#### Adhesives

Water based and hot melt adhesives can be used. It is always best to advise your supplier that it is to be used with Polyart. Some solvent adhesives can be used after consultation with your supplier.

#### Other printing processes

Flexo, Gravure, Thermal Transfer and Inkjet printing are all possible on Polyart. Polyart satisfies BS5665, Parts 2 and 3 : 1989, Safety of Toys and the equivalent European Standard EN71, Parts 1 and 2.

Further information is available from Robert Horne Technical Services.