SPECIALIST printing worldwide

DIGITAL MOVES INTO DÉCOR PRODUCTION

Specialist inks now promote the use of ink-jet for interior decoration

Luca Guggiari

Wood and marble finishes can be emulated with J-Melamine

Italian digital ink manufacturing specialist, J-Teck3, has developed its own range of aqueous-based pigmented formulations that is dedicated to interior decoration applications. Its new J-Melamine series is designed for use with Epson and Kyocera print-heads.

Selecting this sector of ink-jet printing as a priority, the company has long specialised in high quality products for dye sublimation and direct printing onto textiles. But now this credo has guided the company in its latest development with a series of pigmented inks designated J-Melamine which is dedicated to the printing of laminates and panels utilised in the furnishing and décor industry segments.

The potential for J-Melamine has been studied in depth, with its suitability proving to be ideal for printing with devices that are equipped with Kyocera and Epson print-heads. As a result, these inks are suitable for melamine papers which are used to decorate panels and laminates with graphics that emulate marbles, woods, ceramics and decorative patterns whose final applications are furniture, floors, wall coverings, and point-of-sale among suitable end uses.

GOOD ABSORBENT CAPACITY

Luca Guggiari, J-Teck3's R&D Manager, explains: "Melamine papers are special papers, also called décor papers, manufactured with alpha-cellulose material. They are very thin sheets which feature a very good absorbent capacity combined with the characteristic of providing high opacity property to the final product.

"These special papers are soaked with melamine resins which provide extreme surface hardness to the finished panels. The melamine papers are printed in digital with waterbased pigment inks," Guggiari continues. "J-Teck3 has developed two different ink lines, one to be used with printers equipped with Epson print-heads, and the other for industrial printers equipped with Kyocera print-heads. After printing, the melamine papers are applied to the panels. This process is done by thermopressing at 20 to 30 kg/square m with a temperature of approximately 200 degrees C for 30 to 40 seconds. The combined action of temperature and pressure enables the melamine resins to melt and penetrate deeply into the board with the action of permanently anchoring the decorative layer to the substrate. The final product, resulting from this coupling action, features extreme surface hardness, stability and impermeability as well as high resistance to heat, steam and surface spots.

"The recent development in printing techniques allows users to achieve exceptional graphic results as it is now possible to reproduce any natural woods not only in their graphic pattern but even in their physical characteristics," he states. "Furthermore there are panels which can be post-treated and painted so that it is now very difficult to recognise natural woods from their perfect imitations.

REALISING DIFFERENT FINISHINGS

"In addition to woods, it is possible to realise different decorative finishings including matt, glossy and corrugated. These effects can be achieved with the use of special plates that are applied to the heat press, which reproduce in negative the desired finishing and transfer it onto the board during the thermopressing process."

Guggiari adds: "J-Melamine is also suitable for printing laminates, substrates

Examples of the effects that can be created using J-Melamine

covered with synthetic materials formed by layers of papers soaked with thermosetting resins such as melamine or phenolic products, and that melt through heat and high pressure. The printing and thermopressing process is the same as for melamine boards but the plastic laminates feature an overlay finishing made of décor papers which have been treated with transparent synthetic resins. This treatment allows for the laminates to have that peculiar glossy effect combined with very high resistance to scratching as well as chemicals used for cleaning spots of foods and liquids commonly present in kitchens and dining rooms, etc. Plastic laminates are decorative materials also derived from papers for manufacturing where kraft and/or melamine papers are used.

A selection of boards printed with J-Melamine pigmented inks

"We can say that the utmost reliability of J-Teck inks allows to carry out high quality prints on melamine papers featuring exceptional image definition and colour reproduction which are fundamental issues for the final results we have to achieve," says Guggiari. "Also, thanks to the optimal dispersion of J-Melamine, it is possible to print non-stop with no problem and with no clogging of the print-heads.

"In conclusion, it is important to underline how the high digital technology of J-Teck's inks together with the great creativity the interior decoration industry is capable of expressing," Guggiari concludes. "This makes an exceptional combination in a sector which is not conventional but which has huge potential for the future." ■

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