

werbetechnik

Signmaking | Large Format Printing | Lichtwerbung | Digital Signage



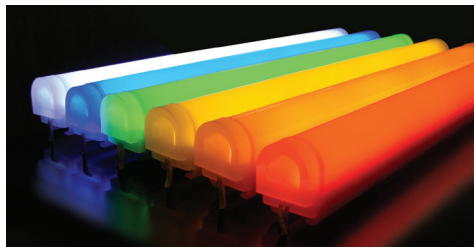
MARABU - Article on the topic
“Water-based resin inks”

PERFEKT EINGELOCHT Ösen, Pressen und Werkzeuge, um bedruckte Werbebanner betriebsbereit zu machen

HARZTINTEN AUF WASSERBASIS Welche Eigenschaften sie haben und wo man sie einsetzt

LED-TUBES UND -SCHLÄUCHE Wo welches Produkt Anwendung findet und wie der Stand der Technik ist

CONTENT FÜR DIGITAL SIGNAGE Wie man Content gestaltet, und was Agenturen leisten können



Offizieller Medienpartner der Verbände:





Marabu produces water-based resin inks and is sure that in the future the demand for them will increase.

© Marabu

Ecologically printed

Compared to solvent-based inks, water-based resin inks are more environmentally compatible. Yet they are still outnumbered on the market.

Compared to other technologies, the market share of water-based resin inks is still very small – but it could become more significant in the future. This is because even in large-format printing, users are thinking more and more ecologically. "Due to their properties, product safety and sustainability, the proportion of resin-based watercolours will certainly continue to grow," says Matthias Schieber, product manager for digital printing inks at Marabu. With inkjet, the manufacturer speaks of colours, not of inks.

Compared to solvent-based inks, water-based systems have the technical advantage that, like UV-curing inks, they adhere via adhesion. Digital solvent-based inks, on the other hand, usually solvate the substrate and then bond with it. "The advantage of direct curing that UV inks have, however, is something that a water-based system cannot offer," explains Matthias Schieber. The range of printable substrates is very broad and corresponds to the spectrum of materials that can be printed



Water-based resin inks are suitable for a wide range of printing materials – inter alia for wallpapers for interior design.

with UV inks. Even non-absorbent substrates can so far be successfully printed with water-based resin inks, the product manager explains. "When compared to UV systems, the cross-cut results are on the same level if, of course, pretreatment and application have been carried out correctly." Similar to conventional printing, water-based systems for curing and fixing also most often involve the use of warm air and infrared. According to Marabu, with binder systems there are various forms of curing or film formation, plus a growing range of raw materials. The duration of drying and hardening is not only influenced here by the inks used, but also by the overall efficiency of the system, the performance, and the temperature sensitivity of the material. "A good balance between drying properties and process suitability - keeping the nozzle open and maintenance-friendliness - is probably the most important expertise in the development of a water-based solution," emphasizes Matthias Schieber.

In the range of a solvent printer

As long as no ink-receiving layer or primer is used, preheating of the printing substrate is always an advantage, explains the Marabu employee. This means that the energy consumption of easily printable materials is in the same range as that of a solvent printer, he says, but the energy input varies depending on the printing and process concept. According to Schieber, in the case of water-based resin inks, the main focus is on harmlessness and product safety as well as on the low VOC emissions.

Matthias Schieber defines the print speed as that of a medium-format printer: "The speed is of course always determined by the printability of the substrate." He adds that in principle, the use of water-based systems is not difficult, and that efficiently coordinating all process-promoting factors, such as heating, air exchange, etc., is advantageous. In general, the technology delivers good results. "The binding agent is crucial when it comes to the durability, and on how good the substrate bond is." Water-based resin inks can fundamentally be used for all types of application, provided that the process and the colours are designed appropriately. There can be limitations when it comes to high productivity figures on difficult-to-print substrates," explains Matthias Schieber.

At Marabu, also because of the company's screen printing history, the water-based systems are often used in industrial printing applications. This frequently involves products that are further processed, he says.

Demand will increase

"Ecology is increasingly on people's minds, and boosting demand for water-based resin paints, among other things through guidelines and company-internal objectives," explains the Marabu product manager. However, the price of ink is determined not only by a possible increase in demand for it but also by the raw materials that are required. "For example, pigment quality will always be reflected in the price." Therefore, as with other technologies, it is best to take a holistic view of the costs before investing – and that means that energy costs and ongoing costs for consumables should also be included in any calculations.

Wennaël Würmli

www.marabu-druckfarben.de