SIEGWERK

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Siegwerk launches new generation of PUR inks to drive the future of gravure printing

The international ink manufacturer Siegwerk now offers an innovative ink system for gravure printing based on polyurethane (PUR). The new technology delivers excellent print results, while also enabling printers to simplify their portfolio, improve processes and reduce operational costs.



Siegwerk, one of the leading providers of printing inks for packaging applications and labels, is now offering a new ink range for gravure printing, which is based on a polyurethane binder system and contains no polyvinyl chloride (PVC). In this respect, Siegwerk is complying with market trends towards reducing PVC use, ink complexity and set-up times, as well as allowing for quicker changeovers between print jobs.

“Lately brand owners have expressed an increasing interest in PVC-free printing inks to realize complex packaging structures. Our new PUR-based ink system fulfills these requirements, while also incorporating other benefits,” explains Dr. Hanns Martin Kaiser, Head of Technology Flexible Packaging EMEA at Siegwerk. The new ink technology - first available for the European market - is for example optimized to meet high performance requirements – such as high bond-strength values in lamination. It allows for use in harsh retort conditions and can also be applied on modern barrier film substrates.

Another benefit is that the PUR ink system is solely based on ethyl acetate as a solvent to allow utilization in monosolvent setups in combination with solvent recovery systems. But in any case, printers can also use common co-solvents like methyl ethyl ketone (MEK), or ethanol etc. The key polyurethane binders are manufactured in Siegwerk’s own PUR production facilities in Annemasse (France) or Bhiwadi (India). “After two years of development, the new ink range performed very successful in first extended industrial trials. It showed excellent printability with solid full tone and outstanding half tone reproduction. We optimized it for best dispersion results in order to produce high color strengths,” says Dr. Hanns Martin Kaiser. Under industrial trial conditions the new PUR inks exhibited very good printability even at high printing speeds above 500 m/min. At the same time, it has been proved that the solvent retention level of the inks is very low.

Available as master batch system

Furthermore, Siegwerk’s PUR ink solution can also be used for medium performance applications, since it can be supplied in two different versions – either as a master base system in the form of readymade inks or as a master batch system, where the full PUR concentrates are combined with various master compounds (technical varnishes) out of one dispenser. Siegwerk’s new ink range is a unique combination of a new technology – the polyurethane binder – with a

proven concept – the masterbatch system. This creates a universal platform in terms of print performance, efficient handling in the ink room and cost-effectiveness. The inks will be tailored to the specific requirements of each customer to match their individual needs, keep the portfolio simple and avoid overdesign. This contributes to simplify ink room complexity and reduce ink stocks, which at the end improves cost-in-use for customers.

Compliant with product safety standards

The new ink technology was developed in accordance with the relevant product safety standards. All ingredients are compliant with the stringent Swiss Ordinance and will also comply with the upcoming new German Ordinance. The new system will add to Siegwerk's broad range of Flexible Packaging solutions – while other ink technologies including PVC-based inks continue to have their merits.

Siegwerk is continuously focussing on the expansion of its offering for the packaging market and to strengthen its market leadership in labels and flexible packaging applications. With a combination of best-in-class ink performance, high product safety, and continuous support and guidance, Siegwerk will make any effort to support customers in addressing upcoming trends and meet their individual needs with cutting-edge solutions.

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