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Siegwerk introduces NC-free toolbox for the design of high-performing and recyclable flexible packaging solutions

With its new NC-free toolbox for flexible packaging, Siegwerk enables its customers to create future-proof flexible polyolefin packaging solutions that are not only compliant with the latest recycling criteria but also ensure high packaging performance in lamination and surface applications.



Siegwerk, one of the leading global providers of printing inks and coatings for packaging applications and labels, today announced the launch of an NC-free toolbox bundling all its nitrocellulose (NC) free ink solutions for flexible packaging applications. The new offering combines new developments with Siegwerk's proven NC-free ink portfolio and includes solutions for lamination as well as surface applications in gravure and flexo printing. The toolbox is designed to enable customers and brand owners – initially in the EMEA region – to realize recyclable flexible packaging across the full-range of application segments.

“Focused on further improving packaging recyclability in the sense of a Circular Economy, the packaging regulatory landscape is continuously evolving, particularly in the European Union. In this context, packaging structures with NC-based inks are getting increasingly under pressure,” explains Dr. Björn Ewig, Head of Technology Flexible Packaging EMEA at Siegwerk. Although inks based on nitrocellulose offer many advantages such as high resistance, fast drying and excellent adhesion, which has made them a common solution in packaging printing for a long time, they can also significantly hinder the material recycling process. For example, they can cause unpleasant odors and discoloration, leading to a lower mechanical strength of the recyclates and thus to a reduced film quality. Consequently, an increasing number of stakeholders along the value chain, such as RecyClass or the German minimum standard, have already adapted their regulations for polyolefin packaging structures, further restricting the use of NC content in packaging. “Here, our NC-free toolbox comes into play. The new set of ink series in the toolbox is a milestone in the development of NC replacement. They are based on a new generation of polyurethane (PU) resins that, for example, give them much better surface resistance. This enables our customers to realize NC-free flexible packaging that is not only recyclable but also offers comparable high packaging performance in lamination and surface applications,” adds Ewig.

As one of the leading ink experts worldwide, Siegwerk has been offering NC-free inks for a long time. The newly introduced toolbox for flexible packaging is now bundling its latest generations of NC-free inks, especially for the realization of recyclable polyolefin packaging. The toolbox offers customers the full range of color, white, and overprint varnishes for both lamination and surface applications in gravure and flexo printing. All the solutions are fully compliant with current recycling guidelines and are available as either ready-to-use ink or masterbatch system. “With our toolbox, customers can now easily find the right NC-free solution they need to realize recyclable PE and PP structures but without

compromising on packaging or process performance," says Dr. Hanns Martin Kaiser, Vice President Flexible Packaging EMEA at Siegwerk.

Major enabler for the new NC-free toolbox is the company's proprietary PU resin technology used as replacement for nitrocellulose. "The in-house development of a binder substitute that, on the one hand, enables high performances of our NC-free solutions and, on the other hand, supports a safe and easy recycling, once again proves the inventiveness and technology know-how of our ink experts," says Kaiser. The company is continuously working on further optimizing its formulations towards recyclability to proactively support its customers in developing pioneering sustainable packaging solutions in the sense of a Circular Economy. Introducing the NC-free toolbox for flexible packaging is just another step to meet the demand for circular packaging designs that ensure an excellent recyclate outcome and comply with the latest Design for Recycling guidelines.

Find out more about our NC-free toolbox here.

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