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Siegwerk offers the first NC-free surface ink systems for improved recyclability of polyolefin-based packaging

The newly introduced NC-free inks not only complement Siegwerk's proven portfolio of NC-free solutions for lamination applications, but also make the company the first to offer NC-free surface printing solutions for enhanced recyclability in flexible plastic packaging.



Siegwerk, one of the leading global providers of printing inks and coatings for packaging applications and labels, has introduced the first nitrocellulose (NC) free ink series specifically designed for surface printing on polyethylene (PE) and polypropylene (PP) packaging solutions. The new offering includes NC-free surface solutions for both flexo and gravure printing and has been developed to meet the latest packaging design guidelines, for example from RecyClass and CEFLEX, set to actively drive packaging design in the sense of a circular economy. With the launch of the first available solutions of their kind, Siegwerk once again

underlines its innovation strength and technological expertise when it comes to developing pioneering solutions to support packaging circularity.

“We have already been offering NC-free inks for lamination for a long time.” says Björn Ewig, Head of Technology Flexible Packaging EMEA at Siegwerk. Together with the company’s newest generation of NC-free solutions for lamination, these new surface ink systems will be part of the company’s recently introduced NC-free toolbox for flexible packaging, initially available to customers in the EMEA region. “With our new NC-free toolbox we now enable printers and converters to better meet the demand for NC-free flexible packaging, ensuring excellent recyclate quality that meets the latest Design for Recycling (D4R) guidelines without compromising on print or packaging performance” adds Ewig.

With their excellent printability, high heat resistance, quick drying capabilities, and excellent adhesion to various surfaces, inks based on nitrocellulose have long been a commonly used solvent ink type in flexo and gravure printing. However, NC-based inks also happen to be a major concern in recycling. Due to the limited thermal stability of nitrocellulose, they can lead to an unpleasant odor, discoloration, and a lower mechanical strength of the recyclate, which can hinder the material recycling process. That’s why more and more stakeholders along the value chain have already adapted their regulations to further restrict NC content in packaging. “With our latest solutions, we have now developed NC-free ink alternatives specifically for surface printing that offer the same technical and mechanical performances as comparable NC-based inks, but with the added benefit of being recyclable,” says Ewig. All the solutions are fully compliant with current recycling guidelines and are available as either ready-to-use ink or masterbatch systems.

For all its NC-free solutions, Siegwerk relies on a set of proprietary, self-developed polyurethane binders as a replacement for nitrocellulose, which has already proven itself in terms of excellent printability and high heat and mechanical resistance. Industrial applications of the new flexo and gravure

surface inks have already shown good sealing resistance and high rub resistance, confirming suitability for surface printing without the use of an additional OPV. “It’s this innovative power that brings pioneering inks and coatings to life, always with the goal to support our customers in realizing sustainable and efficient packaging solutions that comply with existing and upcoming regulatory requirements,” adds Ewig. As the first of their kind, Siegwerk’s new NC-free surface ink systems perfectly complement the company’s portfolio of inks and coatings with a sustainable yet economical alternative for the realization of NC-free recyclable packaging solutions. With this, the company is once again expanding its offering by further developing breakthrough solutions that actively support sustainable packaging designs, and thereby contribute to the company’s goal to drive a circular packaging industry.

Find out more about our NC-free solutions here.

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