SIEGWERK

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Siegwerk and Masterpress take the next step towards improved recyclability of labeled packaging

With its new deinking solution for UV-printed labels, Siegwerk once again underlines its commitment to drive the recyclability of packaging in the sense of a Circular Economy. Initial customer tests have already proven the new primer's effectiveness in deinking energy-cured inks and thus ensuring a high quality of recyclates.



Siegwerk, one of the leading global providers of printing inks and coatings for packaging applications and labels, today announced the launch of its first full UV flexo deinking system for the European market: *CIRKIT CLEARPRIME UV E02*. The new primer technology for non-food packaging applications offers a validated solution for safe and economic deinking of UV-printed self-adhesive labels (PSL). As a result, it improves the recyclability of labeled plastic packaging and enables the recovery of high-quality recyclates that are suitable for reuse in non-food packaging applications.

Although UV inks offer some advantageous properties for printing labels, they also pose a challenge for the subsequent recycling. “Depending on the substrate, UV inks are often very difficult to remove and can therefore lead to contaminations of recyclates, which significantly limits their further reuse,” explains Marc Larvor, Head of Technology Narrow EMEA at Siegwerk. “As a result, it is not surprising that UV-printed packaging has so far been considered as problematic in terms of a Circular Economy.” With CIRKIT CLEARPRIME UV E02, Siegwerk now offers a primer solution that specifically addresses this challenge. By enabling easy and safe deinking of UV-printed self-adhesive labels, it eliminates the need for prior label removal if the used plastics are compatible. “Such combined mechanical recycling of labels and plastic packaging can not only help to increase recycling rates, but also to save time and costs,” adds Marc Larvor. “Thereby, our new UV flexo deinking primer actively contributes to realize high-quality recyclates for circular waste streams.”

In a first field test with Masterpress, one of Europe’s leading suppliers of high-quality labels and printed decorative packaging solutions, Siegwerk’s new deinking primer has proven its effectiveness in all aspects. Masterpress’ research and development (R&D) experts used uncoated transparent or white pressure sensitive labels (PSL) made of PE85 and applied Siegwerk's CIRKIT CLEARPRIME UV E02 followed by bleeding resistant UV flexo inks and an UV flexo OPV. First, the primer created a perfect adhesion between substrate and inks and later enabled full ink and varnish removal of the printed polyethylene (PE) film at standard deinking conditions based on the QT 507 washing protocol of the European PET Bottle Platform (EPBP). The primer layer also dissolved residue-free in the hot washing process and thus proved its ability to generate high-quality transparent or white recyclates, while the used non-bleeding ink formulations ensured a clean and reusable washing solution.

In-house laboratory tests at Masterpress and Siegwerk have shown great recyclate results underlining the effectiveness of the new deinking primer.

“Consistently investing in its R&D laboratory, Masterpress brings state-of-the-art capabilities to test and trial new inks or materials before they enter the market. We are dedicated to advancing innovation within the shrink sleeve and self-adhesive label industry and are well positioned to help accelerate the commercialization of new, sustainable, recyclable products and materials on the market,” said Katarzyna Wasilewska, research and development manager at Masterpress. “Our tests confirmed an impressive recyclability of the UV-printed PE labels. Compared to other labels with no deinking technology, we could observe that contaminations of plastic recyclates due to discoloration could be massively reduced by using Siegwerk's UV Deinking Primer.”

Therewith, CIRKIT CLEARPRIME UV E02 makes a significant contribution to improving the quality of recyclates and increasing their reusability. It works perfectly with the company’s established Sicura flexo series such as the non-low migration Sicura Flex 39-8 or the dual-curing series Sicura Flex Dual Cure. In addition, the new primer is compliant with different film materials and allows an inline printing of deinkable materials in a 100% UV-Flexo press setup keeping the complexity for users as low as possible. “With only three minutes, the new UV flexo primer even offers a deinking speed as fast as a water-based deinking primer making it to a great alternative for converters who are using a pure UV flexo press and are not able to process a water-based primer,” adds Katarzyna Wasilewska.

With CIRKIT CLEARPRIME UV E02, Siegwerk has not only added another functional coating solution to its CIRKIT product portfolio for packaging designs in the sense of a Circular Economy, but is also continuing to drive deinking as a new industry standard to further improve the recyclability of plastic packaging. Currently, the company’s portfolio of circular coatings already covers several water-based and solvent-based technologies for different applications, substrates, coating processes and performances: From barrier coatings against

liquids, oil and grease, water vapor, oxygen, and UV light through heat seal and protection coatings to delamination and deinking primers.

To learn more about Siegwerk's coating offering, please visit our coating s overview.

About Masterpress

Established in 1996, Masterpress is a European leader in high-quality labels and printed decorative packaging solutions. Based in Białystok, Poland, the company serves diverse FMCG packaging industries across Europe. Masterpress provides complete solutions and services for the shrink sleeve, self-adhesive labels and label application segments that characterize the branding aspirations, the sustainability requirements, and the safety, quality and process efficiencies specified by its customers. The company's commitment to creative and functional solutions ensures its customers' products stand out from the crowd, bringing color to Europe's packaged goods, while meeting diverse market and customer needs. For further information about Masterpress and our products, please visit www.masterpress.com.

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