

02/27/2019 Einblicke Insight

Siegwerk supports CEFLEX in designing advanced flexible packaging solutions for a circular economy approach

As a committed member of CEFLEX, Siegwerk actively drives the development of enhanced flexible packaging solutions to further strengthen a circular economy approach for a sustainable future. Jörg-Peter Langhammer, Head of Global PSR + Sustainability at Siegwerk, gives insights into the company's commitment and its active contribution to the initiative.



Q: Who or what is CEFLEX?

A: CEFLEX is a collaborative European consortium of more than 100 companies from the entire value chain of flexible packaging that aims for a circular economy approach for flexible packaging. The members include manufacturers of packaging films and converters as well as brand owners, retailers, recycling companies and equipment manufacturers for the entire recycling process -

making CEFLEX the most significant and solution-oriented industrial initiative in our industry segment.

Q: What is the initiative's "raison d'être", its overall aim?

A: Flexible packaging applications provide customized product protection at minimum total cost and with the lowest environmental impact as compared to other packaging alternatives – in other words, it is very resource efficient. Nevertheless, there is a backlog as regards the end of life scenario and as such regarding recycling. The CEFLEX initiative and all its members are fully committed to the goal of 100 percent collection and recycling of all plastic packaging. It is about further enhancing the performance and recyclability of flexible packaging to strengthen the circular economy approach and realize the full potential for a sustainable future. CEFLEX and its members fully support the Global Commitment and Common Vision issued by the Ellen MacArthur Foundation (EMF) on a New Plastics Economy envisaging a future where plastic, including flexible plastic packaging, never becomes waste and is in line with a circular economy. Together, we join forces to build a cleaner future and a better environment for next generations.

Q: You talk about strengthening the circular economy approach. What is this about?

A: In the past we have had a rather linear economy with - depending on which country we are talking about - landfilling and/or incineration of waste. Today, topics like scarce natural resources, limited fossil resources and global warming due to the excessive production of greenhouse gases underline the significance of new circular approaches. The circular economy means building up recycling chains in which waste of one value chain becomes raw materials for another value chain. A good example of this circular approach is the established paper recycling system. We are convinced that this circular approach for plastics resp. flexible packaging cannot only stop the leakage of plastics into the environment but also drive more sustainable consumption and a better future for the overall

society. That's why we are strongly committed to supporting the goals of a circular economy and making every effort to further advance our inks and varnishes to easily match future recycling processes supporting the circular approach.

Q: Are there any clear deliverables defined by CEFLEX?

A: Yes, the initiative's underlying goal is to prepare a comprehensive sustainability and circular economy roadmap for flexible packaging by 2020. Next to design guidelines for flexible packaging in a circular economy, this roadmap will include activity plans for the optimized collection of flexible packaging waste and an optimized recycling of flexible packaging waste in order to enhance the value of the resulting recyclables. By 2025 CEFLEX also wants to establish a European collection, sorting and reprocessing infrastructure based on the most cost-effective and environmentally friendly processes, concretely developed for post-consumer flexible packaging. To achieve this, CEFLEX's members are holding regular plenary sessions discussing important developments and making trendsetting decisions for the activities of the seven defined workstreams in which selected members cooperatively work on specific problem resolutions during the year. These workstreams are evidently the backbone of any project progress of the CEFLEX initiative.

Q: Why has Siegwerk joined the CEFLEX initiative?

A: Siegwerk has joined the CEFLEX initiative in 2017 as the first ink supplier. For us, CEFLEX offers a perfect platform to network and exchange ideas with experts from other areas and to cooperatively shape the future by redesign and innovation, along with the parallel development of a strong infrastructure to sort and recycle flexible packaging. I am firmly convinced, that together with CEFLEX and its stakeholders, we can make a real difference. The membership is just another example of our extensive activities within Siegwerk's strong sustainability commitment to further shape the future of packaging through innovative and sustainable ink solutions. Prior to CEFLEX, we were already

contributing to a preliminary project regarding the future of flexible packaging managed by the Delft University of Technology in the Netherlands.

Q: What is Siegwerk's concrete contribution to the CEFLEX initiative?

A: Siegwerk is actively contributing its extensive expertise in ink technology and formulation to enhance the performance and recyclability of flexible packaging. Our contribution applies to printing inks and varnishes and their essential role in the future of flexible packaging. Today, our experts are participating in three of the seven overall workstreams that were established to achieve CEFLEX's defined goals. We contribute to the design guidelines for flexible packaging in a circular economy and the influence of inks and printed layers on the automatic sortability of flexible packaging waste and on recyclates derived from mechanical recycling, including extrusion. Additionally, we investigate the removal from inks and printed layers during the recycling process (deinking) to improve the quality of the recyclates and study the ink influence within advanced recycling technologies like solvolysis, where polymers are extracted from pre-sorted post-consumer waste streams. Also chemical recycling options are in scope, which among other things would involve cracking of plastic polymers from waste into monomers, which will be reused in order to produce genuine polymers. Apart from mechanical recycling, many of these advanced recycling technologies might be promising options for the future - they just haven't been implemented on a greater industrial resp. commercial scale yet.

Q: How does the CEFLEX membership fit into Siegwerk's overall sustainability commitment?

A: Siegwerk's membership in CEFLEX is one of many activities emphasizing our strong sustainability commitment. Sustainability means progress for Siegwerk; that's why we are strongly engaged in many different research activities to further shape the future of packaging through innovative and sustainable ink solutions. Today, we have broad experiences with inks for paper & board applications and the corresponding need for ultimate de-inkability of inks to

support paper recycling. We also make every effort to further develop bio-based inks with an increased share of raw materials based on renewable resources - like the newly developed water-based ink range UniBio. Siegwerk already offers ink series that are compostable according to DIN EN 13432. With our ink series Sicura Litho NutriEco we also market the world's first low migration UV ink range for personal care and food applications that has been awarded Gold status of the "Cradle to Cradle® Material Health Certification" by the Environmental Protection Encouragement Agency (EPEA). This proves these low migration UV inks are safe for recycling processes and fit well into the circular economy approach. Overall, our involvement is about continuously assessing ways of enhancing the ecological footprint of our inks while maintaining the ink's quality and performance level.

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