SIEGWERK

04/30/2024 Press release

Siegwerk's in-line printable barrier coatings enable the switch from multi- to mono-material pet food packaging with same packaging and process performance

The barrier properties of a newly designed mono-PE bag for dry pet food demonstrate once again the enabling power of Siegwerk's functional coatings in the development of recyclable packaging solutions made for circularity. The innovative pouch design is the result of collaborating with other industry experts and therefore provides certainty for customers and brand owners.



Mono-PE pet food bag

Siegburg, Germany, April, 30, 2024. - Siegwerk, one of the leading global providers of printing inks and coatings for packaging applications and labels, today announced the successful development of a fully recyclable mono-PE bag for dry pet food using its CIRKIT functional coatings. Together with printing machine manufacturer Windmöller & Hölscher and bag making and machine producer B&B, the company jointly produced a new high-barrier mono-material

packaging, which not only offers the same packaging and process performance as the multi-material structure commonly used for dry pet food but is also fully recyclable.

With all its new regulations and directives, the EU is increasing the pressure on brand owners and packaging manufacturers to rethink the design of packaging towards circularity. “New approaches are needed to meet the upcoming regulatory requirements for circular packaging,” says Belal Habib, Head of Brand Owner Collaboration at Siegwerk. “The challenge is to find a recyclable design that also meets the respective performance requirements of the packaging." For example, pet food packaging does not only have to be food safe, but also requires certain barrier properties, such as resistance to oils and fats, to keep the food fresh and maintain the packaging's structural integrity. For this purpose, complex multi-material structures with a metallized layer have commonly been used so far. “The problem: they are not recyclable,” adds Habib. “This is where innovative barrier coatings applied in thin layers and inline with regular printing inks can help to switch from an incompatible multi-material structure to a fully recyclable mono-material solution in the sense of a Circular Economy.”

By using Siegwerk’s CIRKIT GreaseBar, an innovative inline printable grease barrier coating, and CIRKIT HeatGuard, a coating for high-end sealing process efficiency (heat resistance on film surfaces) that can also be applied inline with regular flexo or gravure machines, the newly developed recyclable mono-PE bag achieves the same packaging performance as non-recyclable complex multi-material systems but with the decisive advantage of being fully recyclable. Both CIRKIT coatings are solvent-based, fully deinkable after delamination and can be printed inline without any loss in print performance. Besides, full PU inks were used that are not only suitable for mechanical recycling but also offer a process performance comparable to NC/PU flexo inks in terms of printing speed and quality. All used inks and coatings comply with

the latest recycling guidelines including the German Minimum Standard and RecyClass for recyclable packaging.

“This development success once again underlines the importance of collaborating along the packaging value chain, combining the specialized know-how of industry experts,” summarizes Habib. “Together, we have succeeded in developing an innovation that is circular, delivers on performance and maintains current process efficiencies due to inline and high-speed conversion. This shows that, by joining forces, we are in a position to make recyclable mono-plastic packaging a reality and thus counter the still wide presence of multi-material laminated structures with future-oriented flexible packaging solutions made for circularity." From raw material selection to packaging recycling, Siegwerk bundles knowledge across all disciplines in the packaging lifecycle and can help redesign entire packaging structures to be sustainable according to existing guidelines.

Samples of the new pet food pouch will be available at Interzoo (May 7-10 in Nuremberg, Germany) at B&B’s booth 4A-413 in hall 4A, at drupa (May 28 – June 7 in Duesseldorf, Germany) at W&H’s booth A51 in hall 15 and on request from Siegwerk via rethinkpackaging(at)siegwerk.com. Visitors to Interzoo can also attend a presentation on "Recyclable Packaging Solutions for Pet Food", which will be held by Siegwerk and B&B experts on May 8 at 4 p.m. CEST.

To learn more about the new pouch design or to order a sample, please visit https://www.siegwerk.com/en/pet-food-packaging.html

Further information about Siegwerk’s coating offering can be found here: https://www.siegwerk.com/en/inks-coatings/coatings.html

Media contact



Nathalie Müller-Samson
Manager Corporate Communications

Tel: +491622002727
Email: nathalie.mueller-samson(at)siegwerk.com

Read and share this content online

Scan the QR code to open this article on the Siegwerk website.