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Siegwerk launches CIRKIT OXYBAR WHITE, combining oxygen barrier and white ink in a single printable layer

Siegwerk launches CIRKIT OXYBAR WHITE, a breakthrough innovation in film-based applications that combines oxygen barrier performance and white ink functionality in one single layer.



Siegburg, Germany, June 15, 2026 – Siegwerk, one of the leading global providers of printing inks and coatings for packaging applications and labels, today announces the launch of **CIRKIT OXYBAR WHITE**, a breakthrough innovation that **combines oxygen barrier performance and white ink functionality in one single layer**.

This unique integration marks a fundamental shift in packaging design, transforming barrier performance from a dedicated material layer into a **functional property of the ink itself**.

A new standard: barrier and design in one step

Conventional packaging structures require separate layers for oxygen protection and white opacity, adding complexity, materials, and processing steps. CIRKIT OXYBAR WHITE eliminates this trade-off.

By merging both functions into a single inline-applied ink, the solution delivers:

- High oxygen barrier performance ($\text{OTR} < 5 \text{ cc/m}^2/\text{day}$ at 50% RH)
- Bright white, opaque finish for premium print quality
- One-pass application via standard printing processes

This enables converters to replace two layers with one, simplifying structures without compromising performance.

OXYBAR WHITE as part of the new Barrier Inks category

With CIRKIT OXYBAR WHITE, Siegwerk introduces a new technological concept: Barrier Inks, where barrier functionality is no longer an additional layer, but an integrated feature of the ink itself.

Of this new category, Siegwerk first launched CIRKIT GREASEBAR WHITE, where grease barrier and white ink functionality were both delivered in one layer.

Now, CIRKIT OXYBAR WHITE expands on that platform, providing oxygen barrier performance together with a white opaque finish.

This shifts the paradigm from *adding barrier materials* to *printing barrier performance*, enabling converters to turn standard backing white into a functional layer and apply barrier inline during printing, without extra process steps.

Designed for the next generation of packaging

The innovation comes at a time when the industry is under increasing pressure to simplify packaging and improve recyclability.

Barrier Inks and, specifically, CIRKIT OXYBAR WHITE enables:

- Replacement of conventional oxygen barrier materials such as EVOH, PVdC, Alu foil and metallized films, in segments not requiring additional WVTR barriers.
- Simplified mono-material structures supporting design-for-recycling
- Reduced material usage and improved resource efficiency

At the same time, it allows converters to print quality, and operational continuity using existing gravure and flexo equipment.

Beyond its functional integration, CIRKIT OXYBAR WHITE offers key operational advantages:

- Visual quality control: white pigmentation enables immediate verification of coating coverage
- Higher productivity potential: optimized formulation supports higher press speeds compared to standard water-based coatings.
- Lower total applied cost: fewer layers, passes, and materials

This combination reduces both technical risk and total system cost, making barrier performance more accessible and scalable.

“With CIRKIT OXYBAR WHITE, we are redefining what an ink can do,” said Gilles Le Moigne, Head of Circular Economy Coatings at Siegwerk. “By combining oxygen barrier and white ink performance in a single layer, we eliminate complexity and open new possibilities for circular packaging design.”

This innovation lays the foundation for a broader shift toward functional inks, where printing becomes a central step in delivering packaging performance.

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