

Glassine by SiOPack®: When visibility meets circularity: Rethinking packaging windows with paper

For decades, packaging with product visibility has relied on one material: plastic. From bakery bags to detergent sachets, visible content meant a plastic film – even if the rest of the packaging was made of paper. But now, a new approach challenges this dependency: a functional paper window, fully recyclable, food-safe, and free of plastic.

Developed by the surface technology experts at Nanopool and marketed as Glassine by SiOPack®, the innovation upgrades traditional glassine paper with a transparent barrier coating – enabling visibility and protection in one layer.

From overlooked to essential: Rediscovering glassine

Glassine, a smooth and grease-resistant paper, has been around for over a century. It's often used for interleaving, envelopes, or dust protection – but its natural opacity and lack of barrier functionality have long excluded it from being a true packaging alternative to plastics.

Glassine by SiOPack® transforms this overlooked material into a new kind of packaging surface: one that shows the product, protects it from air and moisture, and is recyclable within existing paper waste streams.

The key lies in a specially developed, liquid-based barrier coating that is patent-pending and can be applied both inline during paper manufacturing and offline using standard flexographic printing equipment. The result is a transparent, breathable, and protective surface – with no lamination, no plastic films, and no disruption to existing supply chains.

Pilot success: The bakery bag reimaged

One of the clearest demonstrations of this technology is found in a self-service staple: the bakery bag with a viewing window.

In a recent pilot project with a major retailer, traditional bakery bags with plastic windows were replaced by paper-only versions using Glassine by Siopack®. The result: complete removal of plastic, with no compromise on product freshness, hygiene, or visibility. In fact, the clear paper window even improved theft prevention in the self-service area – as the product remained fully visible without the use of plastic.

This use case is just one example of broader potential. In Europe alone, it's estimated that over 150,000 tonnes of plastic per year are used for bakery bag windows. A recyclable paper alternative could significantly reduce plastic waste – and serve as a visible commitment to sustainability for consumers.

Applicable far beyond food

While bakery is a strong entry point, the range of potential applications extends far beyond it. Possible uses include:

- Stand-up pouches for dried goods or cereals
- Sachets for cosmetics, detergent pods, or refills
- Pharmacy packaging for herbal remedies or teas
- Secondary packaging for e-commerce and branded goods

In each of these, the transparent paper window replaces what was once a plastic laminate – creating a monomaterial paper solution that's easier to recycle and easier to trust.

Why now: The regulatory and consumer push

Packaging stakeholders face increasing pressure from both regulators and customers to deliver plastic-free, recyclable, and clearly sustainable solutions. But until now, the visibility function has remained a blind spot – with most alternatives failing in transparency or performance.

Glassine by Siopack® closes that gap. The technology is market-ready, adaptable to industrial processes, and compatible with standard converting lines.

“The time is right because the pressure is real,” says the team at Siopack. “And now, there’s finally a paper-based solution that doesn't force a trade-off between visibility and sustainability.”

Looking ahead

In a market where packaging is becoming not only a protective shell but also a branding and storytelling tool, visibility matters more than ever. But visibility must now serve a new purpose: making sustainability visible.

Glassine by Siopack® offers brands and retailers a credible path to do both – see-through packaging that consumers can trust, and a material choice that meets the demands of tomorrow’s circular economy.

About nanopool / SiOPack®

SiOPack® is a technology platform developed by nanopool GmbH, an owner-managed family business based in Saarland, now in its second generation. For over two decades, nanopool has been developing functional coating solutions for industry, healthcare, and packaging. The company combines technological innovation with a commitment to creating solutions that are ecologically, economically, and socially sustainable.

The SiOPack® barrier technology is based on a patented matrix coating that has been successfully used in various industries for years. The further development into a transparent, paper-based window packaging solution – especially for glassine – is the subject of a separate patent application. This ensures that both the technological foundation and the packaging innovation itself are legally protected.

PRESS INFORMATION

For its contribution to the development of 100% plastic-free, recyclable packaging solutions, the technology has already received multiple awards: including the Green World Award (Gold) in 2020 and the Green Product Award in 2022. These recognitions mark important milestones on the journey from lab innovation to market-ready application. Today, SiOPack® stands for a proven, scalable solution that is increasingly establishing itself in industrial packaging – particularly in response to the growing demand for plastic-free alternatives.

With SiOPack®, nanopool is pursuing a clear goal: to rethink packaging standards – with practical relevance, in partnership, and ready for broad market implementation.

👉 For more informationen: https://www.nanopool.eu/en/press-releases/glassine_by_siopack/