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Fiber-Based Barrier Packaging and Paper Functionalization

Commercial Signals · October 2026

A Commercial signal on fiber-based barrier packaging: the barrier coatings and barrier papers a converter can buy for paper, board and molded fiber, and the PFAS and recyclability evidence behind them. Read for a mid-sized packaging manufacturer that converts film, paper and board for food, beverage and consumer goods brands. Four signals from one cycle.

#	SIGNAL	CONFIDENCE	HORIZON	STATUS
1	On October 20, 2026, UPM put its barrier papers into two named supply chains, one with Siegwerk and Uteco and one with Ingredion and Paramelt	Medium	Short-term (3–12 months)	Verified
2	Only two barrier suppliers in 2026 back PFAS status with independent lab checks; the main coating launches state none	Medium	Short-term (3–12 months)	Review
3	Five barrier coating and paper launches from April to September 2026 publish no barrier figures; only Sun Chemical and Archipelago say their coating is on the market	Medium	Short-term (3–12 months)	Review
4	A birch-bark suberin barrier ran at semi-pilot scale on UPM and Metsä Board papers, and Innomost plans an industrial plant within two to three years	Medium	Long-term (1–3 years)	Review

Every signal rests on two or more dated events. Confidence is published as a band. Where a signal sits below High, the reasoning names the evidence that is missing. Status says where the evidence stands: Verified, Review, or Inconclusive — we looked, and the evidence does not yet support a firmer call.

SIGNAL 1 OF 4

On October 20, 2026, UPM put its barrier papers into two named supply chains, one with Siegwerk and Uteco and one with Ingredion and Paramelt

MEDIUM Short-term (3–12 months) · Supply & Production Readiness · **Verified**

UPM published two partnership releases on October 20, 2026. In the first, UPM supplies the barrier base paper, Siegwerk the CIRKIT BAR SEAL coating and Uteco the flexographic coating technology, in a joint production trial at industrial scale for secondary packaging. In the second, UPM, Ingredion and Paramelt joined forces to investigate a starch-based grease barrier with bio-based heat-seal coatings, and the structure on Solide Lucent 78 gsm paper passed Part 1 recyclability testing at Western Michigan University. Neither release gives barrier figures, PFAS wording, capacity or availability.

REASONING

Two dated releases name every party in the chain and the paper grade, but they are at different stages. The Siegwerk and Uteco structure ran in a production trial; Uteco says the trial "showed that paper packaging can perform efficiently at industrial scale." The Ingredion and Paramelt structure is a joint evaluation, with samples shown at PACK EXPO. Its Western Michigan University Part 1 result is the only named independent recyclability result in this set. A month earlier, UPM launched Asendo 80 grease-barrier label paper and stated that no PFAS are added and that grades are checked by independent third-party laboratories. The October releases make no PFAS statement.

PATTERN

September 15, 2026: UPM announced Asendo 80 grease-barrier label paper (reported by Packaging Gateway on September 16). October 18–21, 2026: UPM, Ingredion and Paramelt showed samples at PACK EXPO in Chicago. October 20, 2026: UPM published the UPM, Uteco and Siegwerk release; CIRKIT BAR SEAL gives moisture and grease resistance and heat seal, paper content can reach "up to 90%", and the release says the pack recycles in standard paper streams, citing CEPI/4evergreen v2. October 20, 2026: UPM published the UPM, Ingredion and Paramelt release, using Solide Lucent 78 gsm and Asendo 65 gsm papers.

IMPLICATION

These are two named routes to barrier paper that a converter can start to qualify, with the paper, coating and equipment partners known. Neither is a buying option yet. Neither release states availability, barrier values, food-contact status or PFAS status, and the Part 1 result covers one structure on one paper grade.

RECOMMENDED ACTION

By end of November 2026, ask UPM and its partners for run data, barrier values, food-contact documents, PFAS evidence and availability for each structure. For the Siegwerk and Uteco structure, also ask which version of the CEPI/4evergreen assessment applies, because the release cites v2.

SOURCES & WHAT THEY SIGNAL

- [UPM Specialty Materials — UPM, Uteco and Siegwerk introduce a paper-based solution for secondary packaging, October 20, 2026](#) — Roles of the three partners, the industrial-scale trial and the CEPI/4evergreen v2 citation.

- [UPM — UPM, Ingredion and Paramelt explore the potential of starch-based barriers in recyclable paper packaging, October 20, 2026](#) — Paper grades, partner roles and the Western Michigan University Part 1 result.
- [Packaging Gateway — UPM launches Asendo 80 grease-barrier label paper, September 16, 2026](#) — States that no PFAS are added and that grades are checked by independent third-party laboratories.

SIGNAL 2 OF 4

Only two barrier suppliers in 2026 back PFAS status with independent lab checks; the main coating launches state none

MEDIUM Short-term (3–12 months) · Standards, Regulatory & Market Access · **Review**

Hartmann's PFAS statement of July 1, 2026 says it has completed an independent laboratory assessment of representative molded fiber packaging products and reports the samples below the EU Packaging and Packaging Waste Regulation thresholds. UPM's Asendo 80 launch in September 2026 says no PFAS are added and that grades are checked by independent third-party laboratories. Three coating launches, from Michelman, Stahl, and Sun Chemical with Archipelago, between April and September 2026 state no PFAS status.

REASONING

Two companies point to laboratory evidence; three launches state nothing. Neither of the two gives the full picture. Hartmann's statement covers egg packaging and does not name the laboratory or give measured values. UPM's statement covers a grease-barrier label paper. Michelman's undated barrier coatings product page describes its range as PFAS-free, but the Nuvita Life release does not, so that wording cannot be carried over to the new product.

PATTERN

April 30, 2026: Michelman announced Nuvita Life 4002 and 4605, with no PFAS statement. May 4, 2026: Stahl launched Repura, with no PFAS statement. July 1, 2026: Hartmann dated its PFAS statement on an independent laboratory assessment of representative products. September 15, 2026: UPM announced Asendo 80, stating that "no PFAS are added". September 16, 2026: Sun Chemical and Archipelago announced their coating alliance, with no PFAS statement.

IMPLICATION

A converter that passes a supplier's PFAS claim on to a customer needs evidence it can show when the customer asks for proof. For most of the coatings launched this year, the supplier has published none. Collecting lab reports now closes that gap before it reaches a customer specification.

RECOMMENDED ACTION

By end of December 2026, ask every current and prospective barrier coating and barrier paper supplier for the analytical method, detection limit, laboratory and results behind any PFAS statement, on the complete coated structure at the intended coat weight. Ask for the lab report, not only a declaration. Request Hartmann's full assessment to confirm its scope and laboratory before using it as a benchmark.

SOURCES & WHAT THEY SIGNAL

- [Hartmann — PFAS Statement, July 1, 2026](#) — Independent laboratory assessment of representative molded fiber products; no laboratory named, no measured values.
- [Packaging Gateway — UPM launches Asendo 80 grease-barrier label paper, September 16, 2026](#) — No PFAS added; grades checked by independent third-party laboratories.
- [Michelman — Michelman introduces Nuvita Life bio-based barrier coatings for paper packaging, April 30, 2026](#) — Launch release with no PFAS statement and no barrier figures.

- [Michelman — Barrier coatings product page, undated](#) — Describes Michelman's barrier coating range as PFAS-free, with no test cited.
- [Packaging Gateway — Sun Chemical and Archipelago paper packaging coatings, September 16, 2026](#) — Alliance announcement with no PFAS statement.

SIGNAL 3 OF 4

Five barrier coating and paper launches from April to September 2026 publish no barrier figures; only Sun Chemical and Archipelago say their coating is on the market

MEDIUM Short-term (3–12 months) · Supply & Production Readiness · **Review**

Lecta, Michelman, Stahl and Melodea brought out barrier papers or coatings for paper and board between April 28 and May 5, 2026. On September 16, 2026, Sun Chemical and Archipelago said their BARV656 VAPORBLOC DFC HOTFOOD coating has finished testing and validation and is now on the market. None of the five publishes barrier figures, and only Sun Chemical and Archipelago state availability.

REASONING

The five events show suppliers covering the main barriers a converter needs on fiber: grease, water vapor, oxygen and heat seal. They also show how far each is from a purchase. Four state no availability. Michelman says its Nuvita Life coatings are "100% bio-based in dry film", and Stahl says paper packs stay "recyclable and repulpable"; both are company statements with no published test result. The Sun Chemical and Archipelago alliance pairs Archipelago's Powerdrop non-contact application with Sun Chemical barrier coatings for board and three-dimensional molded fiber. The coating itself predates the alliance.

PATTERN

April 28, 2026: Lecta showed Metalvac Seal Oxygen Barrier metallized paper (oxygen, water vapor and grease) ahead of interpack, with no availability claim. April 30, 2026: Michelman announced Nuvita Life 4002 (heat seal, grease and mineral oil barrier) and 4605 (grease, water and moisture barrier), shown at interpack, May 7–13, 2026. May 4, 2026: Stahl launched the Repura barrier coatings portfolio (grease, water vapor and oxygen). May 5, 2026: Packaging Europe reported Melodea's MelOx-NGen (oxygen and water vapor barrier) and VBseal (grease, oil and aroma resistance). September 16, 2026: Sun Chemical and Archipelago announced their alliance and said BARV656 VAPORBLOC DFC HOTFOOD is on the market.

IMPLICATION

Only one of the five launches says it is on sale, and none publishes barrier figures. A converter cannot compare these coatings on cost or performance from public data. That data has to come from the suppliers, and from trials on the converter's own lines.

RECOMMENDED ACTION

By end of December 2026, ask each supplier for a technical data sheet with coat weight and barrier values, availability by region, and the PFAS and recyclability evidence asked for in the previous signal.

SOURCES & WHAT THEY SIGNAL

- [Packaging Insights — Lecta barrier paper at interpack, April 28, 2026](#) — Metalvac Seal Oxygen Barrier paper; no availability claim.
- [Michelman — Michelman introduces Nuvita Life bio-based barrier coatings for paper packaging, April 30, 2026](#) — Nuvita Life 4002 and 4605 functions; no barrier figures or availability.
- [Stahl — Stahl launches Repura, a new barrier coatings portfolio for paper-based packaging, May 4, 2026](#) — Grease, water vapor and oxygen barriers; availability not stated.

- [Packaging Europe — Melodea reveals PPWR-compliant water-based barrier coatings, May 5, 2026](#) — MelOx-NGen and VBseal launch; single trade report.
- [Packaging Gateway — Sun Chemical and Archipelago paper packaging coatings, September 16, 2026](#) — The only launch in this set that says its coating is on the market.

SIGNAL 4 OF 4

A birch-bark suberin barrier ran at semi-pilot scale on UPM and Metsä Board papers, and Innomost plans an industrial plant within two to three years

MEDIUM Long-term (1–3 years) · Supply & Production Readiness · **Review**

The University of Oulu reported on June 1, 2026 that the COCOBIN project, co-funded by Business Finland, pilot-produced about 1,200–1,500 meters of a birch-bark suberin coating on UPM and Metsä Board papers at semi-pilot scale. On September 14, 2026, Packaging Europe reported that Innomost produces Suberinno Suberin in Kokkola, Finland and plans to build an industrial plant and scale production within the next two to three years. Neither gives barrier values or a supply date.

REASONING

Two dated events from separate organizations point the same way: suberin has moved from the bench to semi-pilot runs on commercial paper grades, and one producer has a plan to scale. The IOM3 and Packaging Europe reports in August cover the same Oulu trial, so they are not separate evidence. Innomost names no customers and no capacity, and its moisture, grease and oxygen barrier claims are its own. On Innomost's stated timeline, industrial-scale supply is two to three years away.

PATTERN

June 1, 2026: the University of Oulu published the COCOBIN semi-pilot results. August 7, 2026: IOM3 reported the trial. August 11, 2026: Packaging Europe reported the trial, noting the university's statement that the coating could be processed similarly to conventional coatings. September 14, 2026: Packaging Europe reported Innomost's production in Kokkola and its industrial plant plan; Packaging Insights reported it on September 15.

IMPLICATION

Suberin is not a buying option for 2026 or 2027 customer programs. It is a bio-based barrier that has already run on commercial paper grades, which makes it worth tracking for later development work.

RECOMMENDED ACTION

Track suberin; don't buy it yet. In Q3 2027, check whether Innomost has stated plant capacity and a start date, or whether a coating maker has licensed the Oulu formulation. Keep suberin out of 2026 and 2027 customer specifications.

SOURCES & WHAT THEY SIGNAL

- [University of Oulu — Novel wood bark-based packaging coating material was pilot produced in a Finnish research project, June 1, 2026](#) — The COCOBIN semi-pilot run on UPM and Metsä Board papers.
- [Packaging Europe — University of Oulu pilots wood-bark-based coating for fibre-based packaging, August 11, 2026](#) — Trade report of the same trial, with the university's processing statement.
- [Packaging Europe — Birch bark converted into moisture, grease and oxygen barrier for paper packs, September 14, 2026](#) — Innomost's Kokkola production and its two-to-three-year plant plan.
- [Packaging Insights — Birch bark packaging barrier, September 15, 2026](#) — Second report of Innomost's plan.

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