

GLOBAL NETWORK FOR FLEXIBLE PACKAGING

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FOOD

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ITP S.P.A

Dow, Macchi and ITP present new mono-polyethylene pouch prototype with more than 50% advanced recycled content at K 2025



- The prototype pouch is designed for recyclability and suitable for food packaging due to its high barrier properties against gas and moisture.
- The snack pouch prototype contains more than 50% recycled content from advanced (chemical) recycling, supporting packaging circularity without compromising performance or food safety.
- Developed through close value chain collaboration, ITP managed film substrate selection, printing, lamination, and pouch making; Macchi provided high-performance multilayer extrusion technology; Dow supplied advanced polyethylene (PE) resins combining processability and functional performance.
- The new pouch will be officially presented at K 2025 in Dusseldorf, with samples available at Dow and Macchi booths from 8 to 15 October 8 to 15, 2025.

Three key players in the packaging supply chain – Dow (NYSE: DOW), Macchi, and ITP – have joined forces to develop a circular solution for flexible packaging: a mono polyethylene (mono-PE) pouch designed for recyclability, containing over 50% recycled plastic content from advanced (chemical) recycling based on a mass balance credit approach.



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The incorporation of advanced recycled content enables increased uptake of recycled content into technically challenging or highly regulated applications like food packaging, something not possible today at scale with conventional mechanical recycling, thus minimizing the reliance on virgin resources. Incorporating advanced recycling content also ensures that packaging materials are safe for direct contact with food products, providing consumers with peace of mind on food safety while protecting against gas and moisture.

The pouch also proactively addresses the upcoming EU Packaging and Packaging Waste Regulation (PPWR) recycled content quotas, which mandate specific recycled content targets for all plastic packaging by 2030 including 10% for food contact-sensitive applications. This collaboration demonstrates the ability to incorporate higher volumes of advanced recycled material without compromise on performance or safety.

A three-way collaboration to help drive innovation in packaging

ITP SpA, producing high-quality, sustainable PE films for food and industrial packaging, managed film substrate selection, digital printing, lamination, and pouch making. Macchi, a leading manufacturer of blown film extrusion lines, provided high-performance multilayer extrusion technology. Dow, a global materials science company, contributed advanced PE resins – including INNATE™ Precision Packaging Resins, ELITE™ Enhanced PE Resins, AFFINITY™ Polyolefin Plastomers, and BYNEL™ Adhesive Resins – combining excellent processability with top-end functional performance.

Since 1961, Macchi has been a leading company in the blown film extrusion sector. It is within this context of long-standing expertise and innovation that the technological evolution of barrier film production lines should be understood. These advanced systems offer maximum flexibility in film structure design and enable significant reductions in film thickness – delivering both material savings and improved production cost-efficiency.

This evolution also aligns with the growing demand for environmentally responsible technologies that minimize raw material consumption, facilitate packaging reuse, and support efficient end-of-life recycling. Macchi's latest line reflects this commitment to sustainability while also addressing market needs for high-performance processing solutions.

Anthony Michael Caprioli, Macchi CEO, said "This synergy, born from the combined research and expertise of three leaders in their respective fields, represents a key milestone in shaping the future of the plastics industry."

ITP, an Italian family-owned company with over 50 years of expertise in flexible packaging, specializes in PE film extrusion with advanced single-bubble and triple-bubble technology. Thanks to its fully integrated production, ITP ensures rigorous control across every step of the process. This end-to-end oversight enables the optimization of film recyclability without compromising the

technical performance required in the food & beverage sector. As a result, ITP delivers high-performance Mono PE multilayer structures, fully aligned with the market's growing demand for sustainable packaging – combining innovation, safety, and the excellence of Made in Italy.

"Through this collaboration, ITP highlights its expertise in PE extrusion to provide high-performance films with advanced recycled content, fully compliant with upcoming PPWR requirements and ready to meet future market challenges," said **Carlo Poggi**, Managing Director of ITP.

Premiering at K 2025

The new pouches will be officially showcased at the upcoming K 2025, the world's leading event for plastics and packaging technologies, in Dusseldorf from 8-15 October, on display at the Dow and Macchi booths. Visitors will have the opportunity to see firsthand the outcome of this industrial collaboration and learn more about the technologies behind the project.

Visit Dow in building 04.1, outside Hall 4, and discover how you can be part of Generation Transformation. Visit Macchi in Hall 17, booth C20.

About Dow

Dow (NYSE: DOW) is one of the world's leading materials science companies, serving customers in high growth markets such as packaging, infrastructure, mobility and consumer applications. Our global breadth, asset integration and scale, focused innovation, leading business positions and commitment to sustainability enable us to achieve profitable growth and help deliver a sustainable future. We operate manufacturing sites in 30 countries and employ approximately 36,000 people. Dow delivered sales of approximately \$43 billion in 2024. References to Dow or the Company mean Dow Inc. and its subsidiaries. Learn more about us and our ambition to be the most innovative, customer-centric, inclusive and sustainable materials science company in the world by visiting www.dow.com (<http://www.dow.com>).

About ITP

An Italian family business founded in 1972, ITP - Industria Termoplastica Pavese Spa produces polyolefin films for food and industrial packaging, as well as surface protection. ITP offers a range of coextruded films for lamination and food applications, featuring high-barrier, peelable, sealable, resealable, antifog, and anti-UV properties. The company's production site is located in the Milan area and has 250 qualified employees. The production capacity exceeds 40,000 tons per year, with more than 45% exported. In the in-house R&D laboratory, ITP's researchers develop the most innovative, effective, and sustainable packaging solutions. Learn more at <https://www.itp.company/> (<https://www.itp.company/>).

About Macchi

Since its foundation in 1961, Macchi S.p.A. has been in the forefront of technological development of blown film extrusion, so that it is today listed among the world leading blown film lines manufacturers. From the first patent covering a two-layer coextrusion die achieved in 1961, to the recent evolutions of wide, hi-tech multi-layer lines, the Company has kept a focus on productivity, high quality and sustainability of its technological offering. Learn more at www.macchi.it (<http://www.macchi.it>).