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Dow, Macchi and ITP present new mono-polyethylene pouch prototype

With more than 50% advanced recycled content at K 2025

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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 monopolyethylene (mono-PE) pouch designed for recyclability, containing over 50% recycled plastic content from advanced (chemical) recycling based on a mass balance credit approach.

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.