



USA – Dow, Macchi, and ITP have introduced a prototype mono-PE pouch that includes more than 50% chemically recycled material, targeting snacks and other food products under strict regulations.

The pouch uses a mass balance credit method for its recyclate, allowing the inclusion of advanced recycled content in areas where mechanical recycling falls short.

This design cuts down on virgin plastic use and delivers a barrier against gases and moisture for safe food contact.

The pouch meets the Packaging and Packaging Waste Regulation's requirement of at least 10% recycled content for plastic food packaging. ITP managed the film selection, digital printing, lamination, and pouch assembly processes.

Macchi supplied its multilayer extrusion equipment, which enables thinner films and greater structural options.

Dow contributed resins like INNATE Precision Packaging, ELITE Enhanced PE, AFFINITY Polyolefin Plastomers, and BYNEL Adhesives, noted for strong processing ease and performance in barriers and seals.

Carlo Poggi, managing director at ITP, stated that the project shows their skills in PE extrusion for films with high recycled levels that comply with new regulations and handle market demands.

The collaboration proves it's possible to raise recycled content in packaging while keeping safety and functionality intact.

The prototype will appear at K 2025, running from October 8 to 15 in Düsseldorf, Germany. Attendees can view it at Dow's booth in Building 04.1 outside Hall 4 or Macchi's stand in Hall 17, Booth C20.

In a related effort, Volpak, Amcor, and Menshen created a mono-PE inverted pouch for food, home care, and personal care items.

According to the partners, this format weighs less than rigid bottles, cuts carbon emissions, and remains fully recyclable through standard channels.

The design supports easy filling and dispensing while maintaining product integrity.

Südpack recently presented mono-PE stand-up pouches for dry snacks at the Fachpack trade show this year.

Produced on SN Maschinenbau's horizontal packaging machine, these pouches include a built-in PE zipper.

They offer protection from oxygen, water vapor, UV light, and fog without any aluminum or metal layers, ensuring extended shelf life for items like nuts and cereals.

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