



Exxtend™ Exceed™ Exceed™ Stiff+ Exxtra™ Seal ExxonMobil™ LD ExxonMobil™ HD

Crocco, W&H, SIT Group and ExxonMobil Signature Polymers create a mono PE pouch with certified-circular and certified bio-circular polymers* leveraging Exxtend™ technology



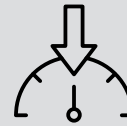
Designed for recyclability**



High packaging integrity



Incorporate ISCC PLUS certified-circular material*



Downgauging opportunity

Data and results presented herein apply specifically to the noted application under this case study. Your results may differ depending on factors such as operating conditions, equipment and materials used.

Challenge

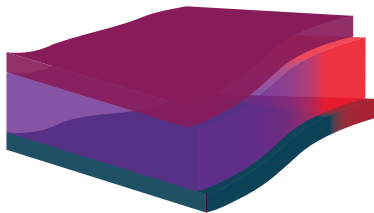
How do you advance the circular economy for primary plastic packaging—designing for recyclability, reducing raw material consumption, and maintaining high performance standards? On top of that, how do you help divert plastic waste from landfills and incineration into useful raw materials?

“We wanted to make sure we created a pouch using certified-circular material, especially given its importance for food contact,” shared Stefano Zelcher CPO, Chief Procurement Officer Crocco. “This wasn’t just a technical challenge, it was a call to rethink collaboration across the value chain. Aligning goals and fostering innovation required a shift in mindset: from individual optimization to collective impact.”

Sealant film

Thickness: 60 µm

- Exceed™ 1018.RB
- Exceed™ Stiff+ m 0926.RL
- ExxonMobil™ HD 6207FL
- Exxtra™ Seal POP 2008.RA
- ExxonMobil™ LD 2025.JD



*Certified-circular and certified bio-circular polymers are virgin quality materials that are accompanied by an ISCC PLUS “Sustainability Declaration” that matches the mass of the virgin quality materials that we sell to a corresponding amount of plastic waste or used cooking oils that we transformed back into usable raw materials through advanced recycling.

** Designed with features intended to support recyclability. Actual recyclability depends on factors such as local collection, sortation, and recycling infrastructure, as well as the condition and configuration of the film after use. However, access to facilities that accept and process plastic film is limited and not widely available.

Solution

Crocco took the first step by teaming up with partners who shared their vision. Their goal was clear: deliver high-performance, direct food contact packaging that meets the most stringent safety and quality standards, while also supporting alternative end-of-life solutions for plastics. To do this, Crocco sourced certified-circular and certified bio-circular* polymers with sustainability declarations — proof that an equivalent amount of plastic waste or used cooking oils had been transformed into usable raw materials through advanced recycling for the production of a mono-PE laminate with an MDO PE substrate film.

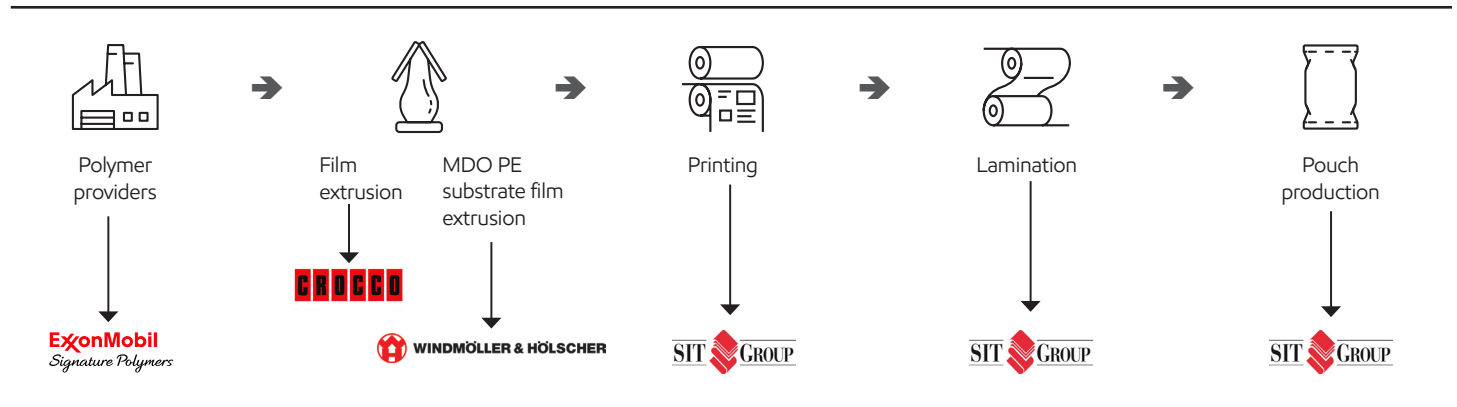
They weren’t alone in this effort. SIT, a leading player in the European flexible packaging market, continuously refined its film converting processes to align with circular economy principles, leveraging ISCC PLUS certification to ensure traceability and sustainability.

Meanwhile, Windmüller & Hölscher (W&H) brought its deep expertise in high-performance extrusion technology, producing a 25 µm high-stiffness, high-clarity PE substrate film for printing and lamination to the Crocco sealant film.

And at the core of it all, ExxonMobil Signature Polymers supplied certified-circular and certified bio-circular polymers*, powered by its Exxtend™ technology for advanced recycling—enabling the transformation of plastic waste into new, high-quality materials.

Key benefits of ExxonMobil Signature Polymers include:

- Exceed™ Stiff+ m 0926.ML contributed to the pouch drop performance
- Exxtra™ Seal POP 2008.RA offered a broad sealing window
- ExxonMobil™ HD 6207.FL contributed to the overall stiffness toughness balance
- ExxonMobil™ LD 2025.JD enhanced processing stability



Results

By incorporating certified-circular and certified bio-circular* polymers, the proposed solution enables the diversion of waste from landfills and incineration into useful raw materials, supporting the use of plastic waste and used cooking oil as alternatives to fossil-based feedstocks.

The mono-material PE packaging film is designed for recyclability**, and the packaging also reduced plastic usage versus a reference design, downgauging from 95 to 85 micron. A combination of Exceed™ Stiff+, ExxonMobil™ HD and Exxtra™ Seal POP provides the necessary stiffness and toughness to enable high packaging integrity.

The collaboration between ExxonMobil Signature Polymers, Crocco, Windmüller & Hölscher, and SIT Group designed this well-known packaging format that not only meets necessary safety and performance standards, but also ensures that end consumer satisfaction is not compromised. The collaboration leads to advancements in downgauging and design for recyclability, innovation, and market leadership in the flexible packaging and plastics industries.

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Data traceability: 2025-RTI-4965



Bring your impossible

ExxonMobil Signature Polymers was born from the belief that people fuel progress. From automotive and construction to packaging, agriculture, industrial, and beyond, we leverage the scale and reach of ExxonMobil to deliver the insights and innovations that empower our diverse, global partners to take their businesses to new heights. We continuously work to provide the listen-first, service-driven, game-changing collaboration that unlocks opportunities for our partners and advances their business goals.



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