



Exceed™ Tough+

Exceed™ Stiff+

Help producers protect their liquid products using eXtreme Performance packaging



Outstanding
package
integrity



Excellent
toughness



Potential for
reduced risk of
leakages after
transport



Hot liquid and
food packaging
applications

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

Create extremely damage-resistant film to protect and preserve liquid products with high integrity packaging — from production to utilization.

Ensuring the integrity of the packaging is crucial for liquid products, especially during long-distance transportation from where the bags are filled to where the product is used. As part of its intent to helping customers create solutions with outstanding package integrity, ExxonMobil wanted to create a hot fill and aseptic packaging utilizing its latest performance polyethylene (PE).

Solution

Extrusion technology with performance PE polymers offer a new benchmark for liquid packaging film solutions that require eXtreme Performance.

A collaboration between ExxonMobil and Bandera has created a 60-micron, 7-layer barrier film. The solution is designed to provide outstanding packaging integrity, excellent toughness/stiffness to help address the potential for leakage. This Bag-in-Box film was extruded on a Bandera line and combines the need of resins suitable for hot fill and aseptic applications.

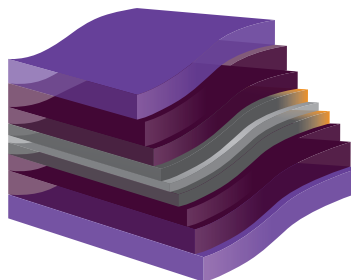
Results

Tough and resilient packaging—thanks to the Exceed™ Stiff+ and Exceed™ Tough+ performance PE resins.

Exceed Stiff+ performance polyethylene (PE) resins deliver industry leading combinations of stiffness and toughness while being easy to process. Utilizing the company's latest innovations in polymer science, the new PE platform provides opportunities to reduce the complexity of film formulations and designs while improving film performance, conversion efficiency, and packaging durability.

In this specific Bag-in-Box application, Exceed Tough+ provides an outstanding flexcrack properties and toughness, while Exceed Stiff+ delivers a unique combination of flexcrack with a higher seal initiation temperature. For hot-fill applications combining multiple films that may stick together/block, this is a crucial property.

**Extreme performance Bag-In-Box film:
7-layer film structure**



Thickness: 60 µm

- Exceed™ Stiff+ m 0820.ML
- Exceed™ Tough+ m 0814.ML
- ExxonMobil™ C4LL 1018
- EVOH - 38 mol%
- Tie resin masterbatch

All data from tests performed by or on behalf of ExxonMobil.

Contact us for more information: exxonmobilchemical.com/pe

ExxonMobil
Signature Polymers

Bring your impossible



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What's new: ExxonMobil Signature Polymers

All our polymers are now positioned under a single portfolio brand: Signature Polymers. The aim is to simplify our product architecture and naming to improve portfolio navigation for you. We would like to stress that our commitment to high quality products remains the same, it is the names that change. Everything else remains the same. We will be making these modifications over the next six months so you will see both old and new grade names highlighted during that time.

Here's a quick overview of brands and grade names that have changed in this document:

Legacy commercial name	New commercial name
Exceed™ S 9272ML	Exceed™ Stiff+ m 0820.ML
Exceed™ XP 8784ML	Exceed™ Tough+ m 0814.ML
ExxonMobil™ LLDPE 1001	ExxonMobil™ C4LL 1018

Some of our existing Exceed, Achieve, Paxon and premium PP/HD grades have moved to Exceed brand; most existing Enable grades have moved to Exceed Flow[+]; most of our existing Exceed XP grades have moved to Exceed Tough[+]; most of our existing Exceed S grades have moved to Exceed Stiff[+]. More details here https://www.exxonmobilchemical.com/en/brands/signature-polymers/exceed_high_performance_polymers or contact your ExxonMobil representative to know more.

Want to see what's changed in our portfolio? Go to [exxonmobilchemical.com/sptransform](https://www.exxonmobilchemical.com/sptransform)