ExxonMobil
Signature Polymers

Factsheet

Exxtra™ Seal Exceed™ Stiff+ Exceed™

Innovative non-barrier liquid packaging solution

Innovative non-barrier liquid packaging solution using Exxtra™ Seal, Exceed™ Stiff+ and Exceed™ performance PE providing outstanding optical properties and excellent balance of stiffness and toughness

- Improved dart drop impact
- Excellent haze
- Improved MD 1% secant modulus
- Comparable sealing

Low density polyethylene (LDPE) has played a significant role in the development of flexible packaging solutions. Due to the unique characteristics of LDPE, it has been predominantly used in various types of liquid packaging applications. LDPE is characterized by high shear thinning behavior resulting in lower melt pressures compared to other types of PE used in the same application. LDPE is also characterized by high zero shear viscosity which imparts improved bubble stability in the film during the extrusion process. LDPE also provides higher peak seal strength due to the molecular architecture.

In terms of mechanical properties pure LDPE is not sufficient to impart required stiffness and toughness properties to a film at a given thickness. ExxonMobil has developed an innovative solution for non-barrier liquid packaging solution without incorporating LDPE using Exxtra Seal, Exceed Stiff+ and Exceed performance polymers

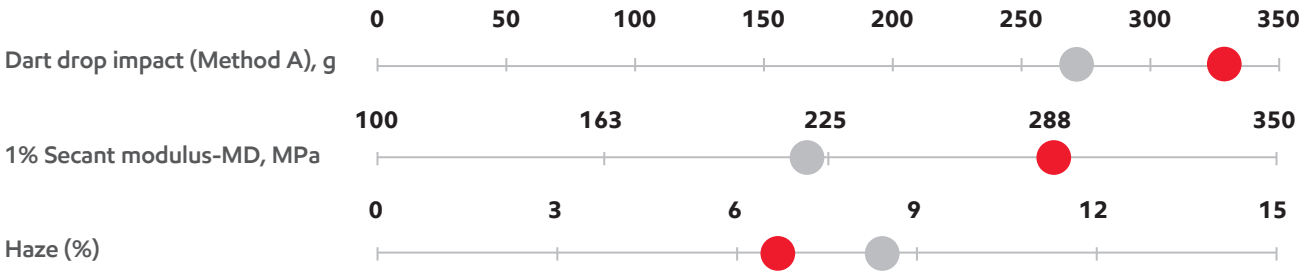
Novel non-barrier liquid packaging solution

Market reference with up to 22% LDPE

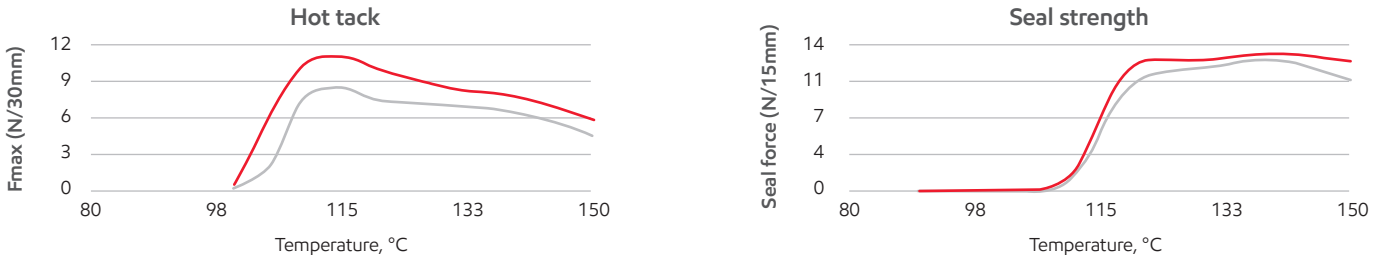
Solution based on Exxtra Seal, Exceed Stiff+ and Exceed performance PE

LLDPE LDPE Exceed Stiff+ m 0238 Exceed m 1018 HDPE# Exxtra Seal m 1012

KABRA ExtrusionTechnik



Excellent balance of stiffness and toughness with enhanced optical properties and comparable sealing



● Solution based on Exxtra™ Seal, Exceed™ Stiff+ and Exceed™ performance PE ● Market reference with up to 22% LDPE

MI: 0.7 g/10min, Density: 0.961g/cc

Test	Test Method based on
Tensile test at RT (MD 1% secant modulus)	ExxonMobil Method
Dart drop impact	ExxonMobil Method
Seal strength	ExxonMobil Method
Hot tack	ExxonMobil Method
Total haze	ExxonMobil Method

Contact us for more information: **exxonmobilchemical.com/pe**

ExxonMobil Signature Polymers

Bring your impossible

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
Enable™ 4002	Exceed™ Stiff+ m 0238
Exceed™ 1018	Exceed™ m 1018
Exceed 1012	Exxtra™ Seal m 1012

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**