



Exceed™ S

Exceed™ XP

Exceed™

Enable™

Value-added agricultural films

Exceed™ S, Exceed™ XP, Exceed™ and Enable™ performance PE polymers can deliver more added-value, more sustainable films for agricultural applications such as greenhouse and tunnel films, mulch films and silage films.



Downgauging
by up to 20%



Aging
performance



Enhanced
film optics



Excellent
processability

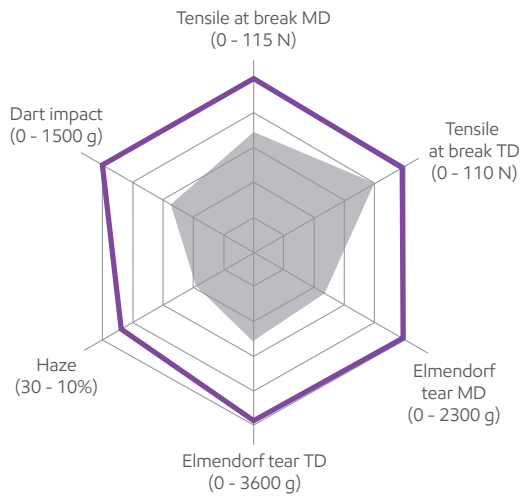
Greenhouse films

Exceed XP performance polymers offer a new benchmark for greenhouse and walk-in tunnel cover solutions that require extreme performance. This portfolio of products offers solutions to fabricate extremely damage-resistant, large lay-flat films that help farmers protect and grow their fruit, vegetables and flowers – throughout the year.

Recommended products for greenhouse and tunnel films

Grades	Melt index (g/10 min)	Density (g/cm ³)	Slip/anti- block	Distinguishing features for eXtreme Performance
Exceed XP 6026ML	0.2	0.916	No	Exceptional melt strength and toughness
Exceed XP 6056ML	0.5	0.916	No	Outstanding extrudability, including on typical LDPE equipment
Enable 2005MC	0.5	0.920	No	Outstanding balance between processing and film properties, including tensile, impact and puncture
Enable 2010MA	1.0	0.920	No	Offers balance between processing and film properties, including tensile, impact and puncture
Enable 2203MC	0.30	0.922	No	Outstanding balance between film properties and processing including bubble stability and extrudability
Escorene™ Ultra EVA FL00112	0.5	0.934	No	In winter, films offer significantly prolonged anti-drip lasting period, aging performance, high thermal insulation and creep resistance
Escorene Ultra EVA FL00014	0.25	0.938	No	In winter, films offer significantly prolonged anti-drip lasting period, aging performance, high thermal insulation and creep resistance
Escorene Ultra EVA FL00018	0.37	0.940	No	In winter, films offer significantly prolonged anti-drip lasting period, aging performance, high thermal insulation and creep resistance

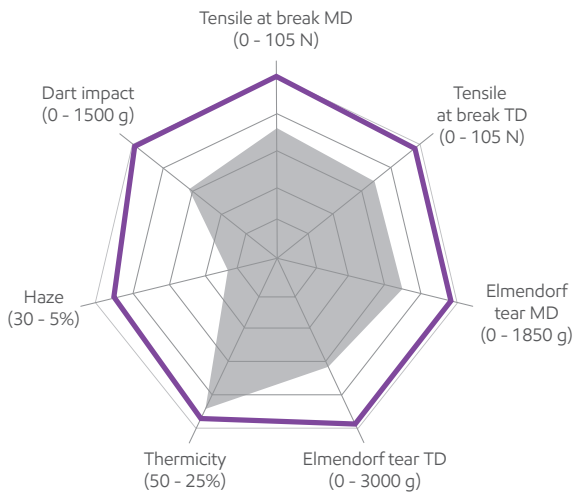
Non-thermic greenhouse film using Exceed™ XP and reference film



Exceed XP formulated non-EVA film and the reference films

	Melt index (g/10 min)	Density (g/cm ³)	Exceed XP coextruded 3-layer 160 µm film	Reference coextruded 3-layer 200 µm film (C8-LLDPE based)
Exceed XP 6026	0.2	0.916	●	
Exceed XP 6056	0.5	0.916		
Enable™ 2005	0.5	0.920	●	
LDPE	—	—	●	●
C8-LLDPE	1.0	0.920		●

Thermic greenhouse film using Exceed XP and reference film



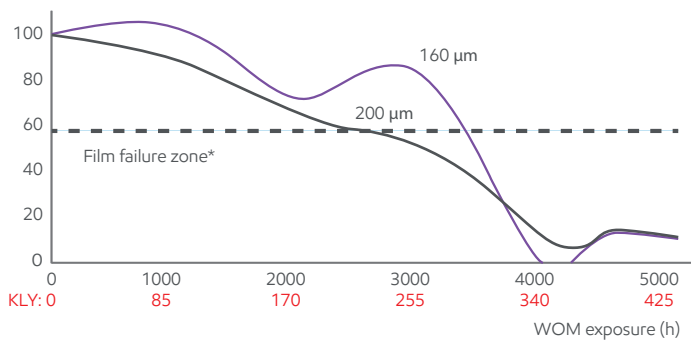
Exceed XP formulated EVA films and the reference film

	Melt index (g/10 min)	Density (g/cm ³)	Exceed XP coextruded 3-layer 160 µm film	Reference coextruded 3-layer 200 µm film
Exceed XP 6026	0.2	0.916	●	
Escorene™ Ultra EVA FL000118 (17.5% VA)	—	—	●	●
EVA (13% VA)	—	—		
LDPE	—	—	●	●
C8-LLDPE	1.0	0.920		●

Data from tests performed by or on behalf of ExxonMobil.

UV-aging of film in a pesticide environment (dry aging*)

Elongation at break MD (retention %)-dry aging



*pesticide simulant exposure/no rain cycle
 + Film failure zone based on BS EN 13206:2017
 - All films contain 1.2% of HALS and 0.1% UV abs (same ppm level)

Data from tests performed by or on behalf of ExxonMobil

Superior aging performance with thinner films using ExxonMobil performance polymer (under sunlight and pesticides).

— Exceed XP 6026 performance polymer – 160 µm mono film
 — Reference polymer (100% LDPE (0.922d, 0.33MI)) – 200 µm mono film

Silage and mulch films

Exceed™ XP enables converters to fabricate high-integrity, long-lasting agricultural films that are extremely damage-resistant to protect and preserve harvests and other farm produce. The extreme toughness performance of these polymers helps prevent damage in the field and during handling to maintain film integrity in applications such as silage stretch wrap and mulch.

Long-lasting mulch films increase crop production rates and allows farmers to spend time on more productive activities rather than collecting mulch film that has broken down.



Extreme toughness



Outstanding MD tear strength



High melt strength

Recommended Exceed XP grades for silage and mulch films

Grades	Melt index (g/10 min)	Density (g/cm ³)	Melt flow ratio (I ₂₁ /I ₂)	Distinguishing features for eXtreme Performance
Exceed XP 8656	0.5	0.916	28 - 30	Exceptional tear and toughness Excellent bubble stability
Exceed XP 8358	0.5	0.918	28 - 30	Exceptional tear, toughness and holding force Excellent bubble stability
Exceed XP 8318	1.0	0.918	28 - 30	Excellent tear, toughness and holding force Excellent film extrudability
Exceed XP 6026	0.2	0.916	48 - 52	Exceptional melt strength and toughness
Exceed XP 6056	0.5	0.916	48 - 52	Outstanding extrudability, including on typical LDPE equipment

Silo bags

Silo bags used by farmers to store and protect grains and silage need to be extremely tough and durable with tear and puncture resistance, and good dimensional stability.

Silo bag films made with Exceed™ S performance polymers deliver extreme toughness while providing opportunities to downgauge and reduce costs. Whether you are developing 3- or 5-layer film solutions, our range of polymers can create the right balance of performance and value to meet your silo bag needs.



Stiffness



Dart impact



Low creep



MD tear balance

Moving up the value chain of silo bag solutions

Grades	Melt index (g/10 min)	Density (g/cm ³)	Slip/ anti-block
Exceed™ S 9243ML	0.85	0.926	No
Exceed™ XP 6056ML	0.50	0.916	No

	Reference: 230µm	Less aggressive downgauging: 215µm	Bold downgauging, enhanced melt strength: 200µm
Ratio	3 / 4 / 3 monolayer via coex	3 / 4 / 3 monolayer via coex	3 / 4 / 3 coex
Skins	60% C8LLDPE 30% LDPE* Additives	70% Exceed S 92S43ML 20% LDPE* Additives	80% Exceed XP 6056 10% LDPE* Additives
Core	<i>Represents average formulation of actual 3L coex</i>	<i>Represents average formulation of actual 3L coex</i>	80% Exceed S 9243ML 10% LDPE* + Additives

* LDPE = 0.922 g/cm³, 0.33 g/10 min MI @ 190°C, 2.16kg

In summary, as a global supplier you can rely on our consistent, high-quality PE performance polymers to deliver sustainable and innovative agricultural solutions that deliver benefits across the value chain.

Contact us for more information: [exxonmobilchemical.com/pe](https://www.exxonmobilchemical.com/pe)

ExxonMobil
Signature Polymers

Bring your impossible



© 2024 ExxonMobil. ExxonMobil, the ExxonMobil logo, the interlocking "X" device and other product or service names used herein are trademarks of ExxonMobil, unless indicated otherwise. This document may not be distributed, displayed, copied or altered without ExxonMobil's prior written authorization. To the extent ExxonMobil authorizes distributing, displaying and/or copying of this document, the user may do so only if the document is unaltered and complete, including all of its headers, footers, disclaimers and other information. You may not copy this document to or reproduce it in whole or in part on a website. ExxonMobil does not guarantee the typical (or other) values. Any data included herein is based upon analysis of representative samples and not the actual product shipped. The information in this document relates only to the named product or materials when not in combination with any other product or materials. We based the information on data believed to be reliable on the date compiled, but we do not represent, warrant, or otherwise guarantee, expressly or impliedly, the merchantability, fitness for a particular purpose, freedom from patent infringement, suitability, accuracy, reliability, or completeness of this information or the products, materials or processes described. The user is solely responsible for all determinations regarding any use of material or product and any process in its territories of interest. We expressly disclaim liability for any loss, damage or injury directly or indirectly suffered or incurred as a result of or related to anyone using or relying on any of the information in this document. This document is not an endorsement of any non-ExxonMobil product or process, and we expressly disclaim any contrary implication. The terms "we," "our," "ExxonMobil Product Solutions" and "ExxonMobil" are each used for convenience, and may include any one or more of ExxonMobil Product Solutions Company, Exxon Mobil Corporation, or any affiliate either directly or indirectly stewarded.

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. The composition of the products are unchanged, it is only the names that updated. We will be making these modifications over the next few months, through mid 2025, 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 will be changed in this document:

Legacy Commercial Name	New Commercial Name
Exceed™ XP 6026	Exceed™ Flow+ m 0216
Exceed XP 6056	Exceed Flow+ m 0516
Enable™ 2005MC	Exceed Flow m 0520.MC
Enable 2010MA	Exceed Flow m 1020.MA
Enable 2203MC	Exceed Flow m 0322.MC
Exceed XP 8656	Exceed™ Tough+ m 0516
Exceed XP 8358	Exceed Tough+ m 0518
Exceed XP 8318	Exceed Tough+ m 1019
Exceed™ S 9243ML	Exceed™ Stiff+ m 0926.ML
Exceed XP 6056ML	Exceed Flow+ m 0516.ML

Want to see what's changed in our portfolio? Go to exxonmobilchemical.com/sptransform