



Energy lives here™

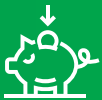


Value-added agricultural films

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.

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.



Downgauging by
up to **20%**



Aging
performance



Enhanced
film optics



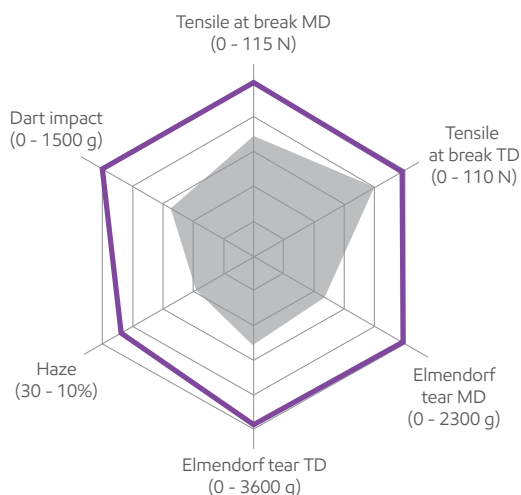
Excellent
processability

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	0.27	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

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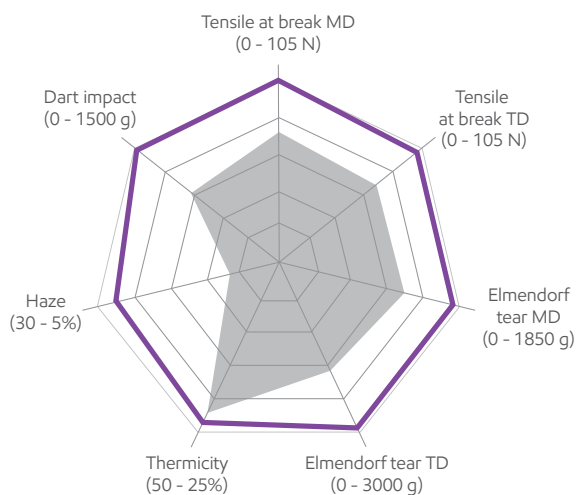


Exceed XP formulated non-EVA film and the reference films

	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

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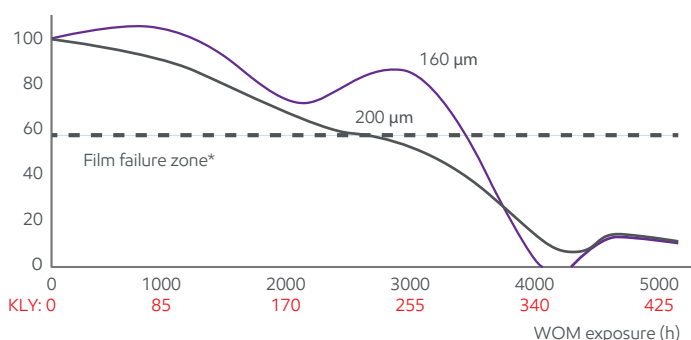
Exceed XP formulated EVA films and the reference film.

	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)

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

— Reference polymer (100% LDPE (0.922d, 0.33MI)) – 200 µm mono film
 — Exceed XP 6026 performance polymer – 160 µm mono film
 Data from tests performed by or on behalf of ExxonMobil

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.



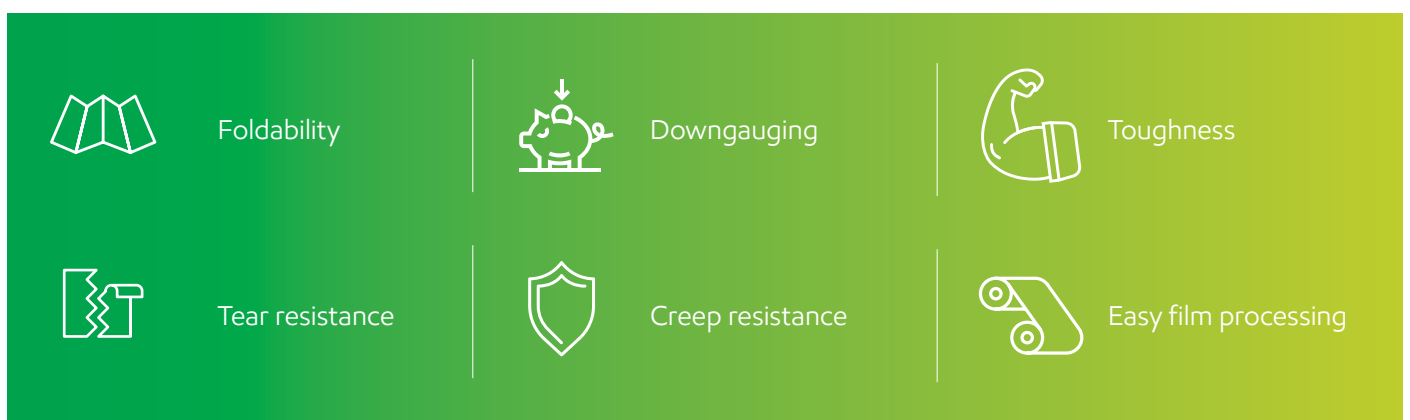
Recommended Exceed XP grades for silage and mulch films

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

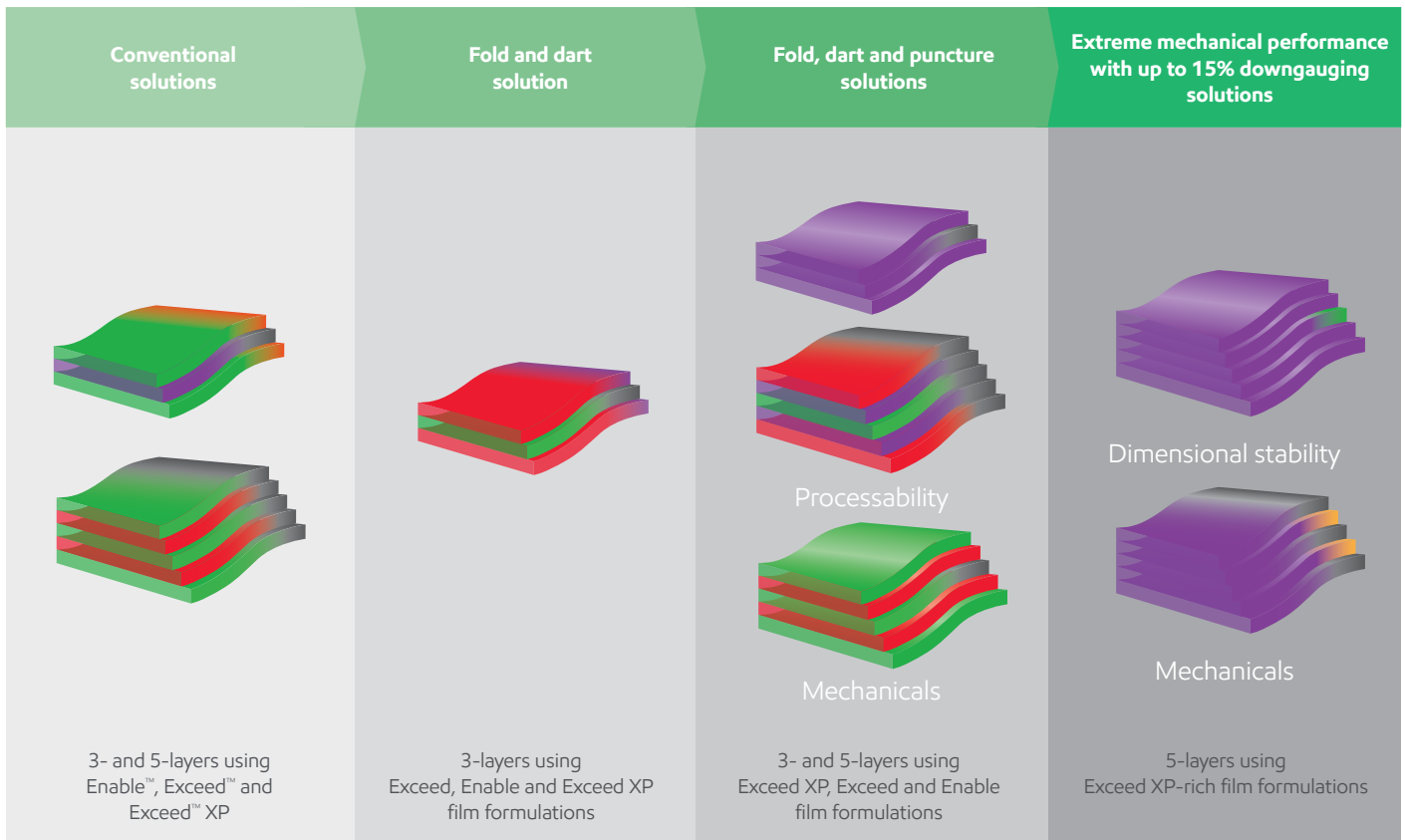
Silo bags

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 XP 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.



Moving up the value chain of silo bag solutions



■ Exceed XP
 ■ Exceed
 ■ Enable
 ■ LDPE
 ■ C4-LLDPE

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.



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