



tomorrow's  
performance  
today

# Performance polyethylene Product finder

Explore our industry leading Exceed™ S, Exceed™ XP, Exceed™, Enable™ and Exact™ performance polyethylene (PE) resins, which have been designed for a broad range of applications.

## ■ Exceed S PE resins for so much, so simply

Exceed S resins enable converters to rethink film design for simpler solutions. These resins deliver industry leading combinations of stiffness and toughness, while being easy to process. Exceed S polyethylene resins provide opportunities to reduce the complexity of film formulations and designs, while improving film performance, conversion efficiency, and packaging durability. Ideally suited for flexible films used in food, industrial and agricultural applications, converters benefit from:

- High performance with easy processing
- Stiffness and toughness with less blending
- Resin solutions that simplify operations and improve film and package durability
- Low melt pressure and high output on most blown film lines

## ■ Exceed XP PE resins for extreme performance

Exceed XP PE resins offer mechanical properties that allow converters to manufacture extremely damage-resistant films for highly demanding applications. Film formulations can be designed to provide extreme performance, while helping to manage costs through to the end-user.

- Extreme flex-crack and dart impact resistance
- Exceptional aged property retention
- Outstanding machine direction (MD) tear strength
- Enhanced flexibility and sealability

## ■ Exceed PE resins for sealability and optical performance

Exceed PE resins enable converters to manufacture films with a combination of outstanding sealing and best-in-class optical properties like high gloss and transparency. Due to the toughness and impact resistance delivered by Exceed PE resins, thinner films are possible, helping to reduce working capital requirements due to material savings and reduced inventory levels.

- Sealing performance and gloss and transparency
- Toughness, strength and impact resistance

## ■ Enable PE resins for easy processability

Enable PE resins deliver optimized performance by combining excellent processability and bubble stability with HAO properties in a single resin for more stable operations and better line output.

- Excellent processability and operational stability
- Higher output and downgauging potential

## ■ Exact plastomer resins to boost toughness, clarity and sealing performance in flexible packaging

Exact plastomer resins are designed to provide key performance properties in both monolayer and multilayer blown film applications, such as food packaging, laminated films and multilayer packaging film. Produced using ExxonMobil's proprietary metallocene technology, these high-performance plastomers can be blended with polyolefins to enhance heat-sealing performance and toughness in film applications.

Product finder																	Melt index (g/10 min)	Density (g/cm³)	Melt flow ratio (MFR)	Peak melting temperature (°C)	Tensile strength at break MD (MPa)	Tensile strength at break TD (MPa)	Elongation at break MD (%)	Elongation at break TD (%)	Secant modulus MD - 1% secant (MPa)	Secant modulus TD - 1% secant (MPa)	Dart drop impact (g) <sup>B</sup>	Elmendorf tear strength MD (g)	Elmendorf tear strength TD (g)	Puncture force (N)	Puncture energy (J)	Flexible food packaging	Liquid packaging	Medium and heavy duty sacks	Compression packaging	Overwrap packaging	Soft-shrink packaging	Collation shrink packaging	Stretch packaging	Stretch hood packaging	Other films & liners	Agricultural films	Geomembranes, aqua/thick liners	Hygiene	Molding & compounding	Wire and cables	Raffia packaging			
Exceed™ S performance polyethylene	Properties																Exceed S 9243ML*	0.85	0.926	-	125	80	60	460	690	290	370	480	210	540	47	3.2	Applications														Features			
	Exceed S 9272ML*																0.80	0.920	-	124	70	55	430	660	220	280	670	210	510	48	3.5															Extend the limits of stiffness and toughness balance, excellent film processing				
	Exceed S 9333ML*																2.0	0.925	-	124	63	50	560	690	260	330	460	210	480	40	2.7															Extend the limits of toughness and stiffness balance, exceptionally high toughness, excellent film processing				
																																													High stiffness and toughness, exceptionally easy extrusion at low melt pressure					
Exceed™ XP performance polyethylene	Properties																Exceed XP 6026*	0.20	0.916	-	110	70	70	390	640	180	220	680	60	400	67	4.8	Applications														Features			
	Exceed XP 6056*																0.50	0.916	-	109	60	60	390	710	160	200	510	80	460	58	4.4															Shrink performance, mechanical properties (puncture, dart), bubble stability, holding force, puncture, high toughness				
	Exceed XP 7021ML*																0.20	0.911	-	-	70	70	360	600	120	160	1100	40	210	66	5.1															Extrudability on typical LDPE equipment, toughness, seal strength				
	Exceed XP 7052ML*																0.50	0.912	-	-	70	70	410	630	110	130	900	80	270	60	5.2															Bubble stability, mechanical performance, sealing performance, optical properties				
	Exceed XP 8318*																1.0	0.918	-	121	60	50	370	660	190	230	670	370	470	44	3.2															Bubble stability, mechanical performance, sealing performance, optical properties				
	Exceed XP 8346																3.5	0.916	-	-	48	38	500	680	120	120	290	280	350	36	3.8															Stiffness, impact resistance, extrudability and higher heat resistance				
	Exceed XP 8358*																0.50	0.918	-	121	70	50	300	640	200	250	710	530	500	53	3.7															Processability, puncture, toughness				
	Exceed XP 8656*																0.50	0.916	-	121	70	50	280	630	180	200	660	680	680	48	2.7															Tensile strength, MD tear strength with MDO				
	Exceed XP 8784*																0.80	0.914	-	121	60	50	330	620	170	210	910	310	460	55	4.2															Flex-crack, dart resistance, bubble stability				
																																															Easy extrusion, bubble stability, step-out mechanical performance, excellent sealing performance			
Exceed™ performance polyethylene	Properties																Exceed 1012*	1.0	0.912	-	117	50	48	460	580	120	130	500	210	330	43	2.9	Applications														Features			
	Exceed 1018*																1.0	0.918	-	118	60	50	480	640	180	200	590	250	430	50	3.9															Low temperature toughness, sealing, impact and puncture resistance				
	Exceed 1327*																1.3	0.927	-	123	60	50	580	700	310	360	140	160	430	48	3.1															Tensile, impact strength, puncture				
	Exceed 2012*																2.0	0.912		114	70	60	560	610	100	100	690	240	300	57	5.3															Tensile, impact strength, puncture and excellent drawability				
	Exceed 2018*																2.0	0.918	-	117	60	60	590	690	170	180	580	330	460	48	4.1															Sealing, low temp, toughness, puncture				
	Exceed 3518																3.5	0.918	-	114	70	47	510	680	110	120	140	190	500	47	4.3															Extrudability, tensile, impact strenght, puncture				
	Exceed 3527																3.5	0.927	-	121	60	41	530	750	190	200	60	70	400	45	2.6															Tensile, impact resistance, puncture toughness, for cast film				
	Exceed 3812																3.8	0.912	-	110	48	44	450	610	87	97	610	250	440	-	-															Stiffness, tensile, impact and puncture resistance				
	Exceed 4518																4.5	0.918	-	114	70	48	500	730	100	120	140	150	460	48	4.5															Processing, puncture, low temperature toughness				
	Exceed 4536																4.5	0.936	-	125	43	33	580	720	370	400	<60	30	110	28	1.1															Tensile, impact resistance, puncture toughness, for cast film				
	Exceed 0015																15	0.918	-	113	-	-	-	-	-	-	-	-	-	-	-	-															Processability, stiffness, toughness, mechanical performance, hot-tack, for cast film			
	Exceed 0019 <sup>A</sup>																19	0.918	-	113	-	-	-	-	-	-	-	-	-	-	-	-															Organoleptics, toughness, for extrusion coating and injection molding			
																																															Organoleptics, toughness, for extrusion coating and injection molding			
Enable™ performance polyethylene	Properties																Enable 2005*	0.50	0.920	-	115	60	60	480	710	210	240	240	90	570	54	3.8	Applications														Features			
	Enable 2010*																1.00	0.920	-	114	50	50	510	720	200	230	180	130	550	47	3.2															Processability, toughness, cast film available				
	Enable 2203*																0.27	0.922	-	116	60	60	430	680	250	320	250	40	430	54	3.4															Processability, toughness, cast film grade available				
	Enable 2703*																0.30	0.927	-	119	60	50	480	750	310	380	140	40	670	50	2.8															Shrink and toughness balance, good optic performance, bubble stability				
	Enable 2705*																0.50	0.927	-	119	60	50	520	760	300	360	130	50	730	48	2.7															Stiffness, toughness, processability				
	Enable 3305																0.50	0.933	-	122	-	-	-	-	-	-	-	-	-	-	-	-															Processability, stiffness and toughness			
	Enable 3505*																0.50	0.935	-	123	60	46	550	790	430	520	70	20	610	48	2.3															High toughness, bubble stability, stiffness				
	Enable 4002*																0.25	0.938	-	128	70	49	490	810	540	730	60	10	600	50	2.2															Processability, stiffness and toughness, shrink				
	Enable 4009*																0.90	0.938	-	-	60	43	600	830	510	590	<60	20	550	35	0.98															Bubble stability, melt strength, stiffness, shrink				
	Enable 9365*																0.50	0.935	-	124	-	-	-	-	-	-	-	-	-	-	-	-															Extrudability, stiffness and toughness			
																																														Outstanding balance between extrusion processing and properties, including hydrostatic strength				
Exact™ plastomer resins	Properties																Exact 3236*	2.0	0.908	-	114	60	60	480	570	87	90	800	210	280	57	6.3	Applications														Features			
	Exact 3237*																2.0	0.908	-	114	60	60	480	570	87	90	800	210	280	57	6.3															Low seal initiation temperature and high toughness				
																																														Low seal initiation temperature and high toughness with slip and anti-block added				

## Performance polyethylene

### Exceed™ S PE resins for so much, so simply

When your applications are so demanding a compromise between stiffness and toughness cannot be accepted, and easy processability is essential, Exceed S PE resins are the solution that elevates performance, while simplifying operations.

### Exceed™ XP PE resins for extreme performance

If your applications are highly demanding, Exceed XP PE resins offer the mechanical properties needed to truly deliver extreme performance.

### Exceed™ PE resins for sealability and optical performance

For your applications that need a combination of outstanding sealing and best-in-class optical properties, Exceed PE resins are the answer.

### Enable™ PE resins for easy processability

When you are looking for more stable operations and better line output, Enable PE resins deliver excellent processability and bubble stability with HAO properties in a single resin.

### Exact™ plastomer resins

Enhance heat-sealing performance and toughness in film application.

### Alternative PPA PE

ExxonMobil has developed performance PE products with an alternative non-fluoropolymer polymer processing aid (PPA). Please contact your ExxonMobil representative for availability.

## Specialty copolymers

### Escorene™ Ultra EVA ExxonMobil™ EVA

For agricultural, photovoltaic cell encapsulation and packaging. Enhances sealing performance in packaging.

### Escor™ EAA

For powerful adhesion to metal and metal substrates.

### ExxonMobil™ EnBA

For adhesion to polar substrates, without the need for primers.

### Optema™ EMA

For softness, thermal stability and chemical adhesion.

### Polybilt™ modifiers

Ethylene copolymer developed for the construction industry.

## LLDPE, LDPE, HDPE resins

### LLDPE resins

If your applications need an optimal balance of toughness and stiffness, specify ExxonMobil™ and ExxonMobil™ NTX linear low-density polyethylene (LLDPE) resins.

### LDPE resins

For your applications that require a combination of high melt strength, excellent optical properties, and outstanding shrink performance, turn to ExxonMobil™ low-density polyethylene (LDPE) resins.

### HDPE resins

When your applications need a balanced combination of processability, toughness and stiffness, our high-density polyethylene (HDPE) resins are the solution.

### HDPE resin for MDO films

ExxonMobil has developed a novel high density polyethylene (HDPE) grade, ExxonMobil™ HD7165L, for Machine Direction Oriented (MDO) PE film applications. Designed for recyclability\*, HD7165L can help converters create mono-material laminates to replace multi-material laminate structures which can be difficult to mechanically recycle. Offering excellent optical properties and outstanding mechanical properties, ExxonMobil™ HD7165L is well suited to help enable mono-material laminated packaging.

### Paxon™ HDPE resins

If your rigid applications need a step-change in ESCR (Environmental Stress Cracking Resistance) performance without compromising stiffness, impact, top load, or processability, Paxon HDPE resins are a perfect choice.

\* Recyclable in communities with programs and facilities in place to collect and recycle plastic film  
Product brands may not be available in all regions.

Test	Based on test method
Density	ExxonMobil method
Melt index (190°C/2.16 kg)	ExxonMobil method
Melt flow rate (MFR)	ExxonMobil method
Peak melting temperature	ExxonMobil method
Tensile strength	ExxonMobil method
Elongation at break	ExxonMobil method
Secant modulus	ExxonMobil method
Dart drop impact	ExxonMobil method
Elmendorf tear strength	ExxonMobil method
Puncture force	ExxonMobil method
Puncture energy	ExxonMobil method
Puncture at 250% stretch, (on highlight tester, for rel. comparison only)	ExxonMobil method
Cling force	ExxonMobil method
Unwinding noise	ExxonMobil method

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