

# Performance polymers Product finder

Energy lives here



Exceed™ XP, Exceed™, Enable™ and Vistamaxx™ performance polymers are ideal for a range of applications. From solutions that require eXtreme Performance to those that offer an optimum balance of high alpha olefin (HAO) benefits, our portfolio can meet your needs.

## ■ Exceed XP – when eXtreme Performance matters, for step-out mechanical performance and excellent processability

Exceed XP is the latest addition to our performance polymer portfolio. By combining proprietary catalyst and process technology, this new line of products delivers eXtreme Performance for a variety of applications.

- Extreme toughness new performance levels of impact strength, tear strength and flex-crack resistance can now be achieved
- Easy processing with enhanced melt strength

## ■ Enable – optimum balance for processing and bubble stability with HAO properties

Enable allows film converters to further enhance their business with more stable operations, improved line output and film downgauging — in one single polymer for monoand co-extrusion operations.

- Improved film output and film downgauging
- Easy processing for improved operations

## ■ Exceed – for superior performance with outstanding mechanical and sealing properties combined with best-in-class optics

Exceed is used to formulate a wide range of film structures, offering superior mechanical performance for highly demanding end-use applications. Properties and capabilities include:

- · High toughness, sealing and outstanding tensile strength
- Outstanding optical properties with gloss, haze and transparency

### ■ Vistamaxx – further elevates performance levels, processing and cost efficiencies

Vistamaxx is used by converters to further enhance performance levels in extrusion and molding articles across many industries, from packaging and construction to healthcare and personal hygiene. In compounds or pure, properties and capabilities include:

- Enhanced film performance flexibility, elasticity, toughness, adhesion and surface cling
- Higher impact resistance and filler loading as masterbatch carrier and in compounds or pure in molded and extruded articles

Product finder		Melt index (g/10 min)	Density (g/cm³)	Melt flow ratio (MFR)	Peak melting temperature (°F)	Tensile strength at break MD (psi)	Tensile strength at break TD (psi)	Elongation at break MD (%)	Elongation at break TD (%)	Secant modulus MD - 1% secant (psi)	Secant modulus TD - 1% secant (psi)	Dart drop impact (g) <sup>c</sup>	Elmendorf tear strength MD (g)	Elmendorf tear strength TD (g)	Puncture force (lbf)	Puncture energy (in lb)
							Рго	perties								
Exceed™ XP	Exceed XP 6026	0.20	0.916	48-52	230	9400	9700	390	640	26000	32000	680	60	400	15	43
performance	Exceed XP 6056	0.50	0.916	36-38	228	8500	8600	390	710	24000	29000	510	80	460	13	39
polymers	Exceed XP 8318	1.00	0.918	28-30	250	9300	7500	370	660	28000	33000	670	370	470	10	29
	Exceed XP 8358	0.50	0.918	28-30	250	10000	7900	300	640	29000	36000	710	530	500	12	33
	Exceed XP 8656	0.50	0.916	28-30	250	10000	7300	300	640	27000	33000	750	500	540	12	30
	Exceed XP 8784	0.80	0.914	28-32	250	9200	8000	330	620	24000	31000	910	310	460	12	37
							Рго	perties								
Exceed™	Exceed 1012	1.0	0.912	_	238	8300	8000	450	600	17000	18000	900	200	310	13	47
performance	Exceed 1015	1.0	0.915	_	242	9300	8200	470	620	21000	24000	740	210	360	12	40
polymers	Exceed 1018	1.0	0.918	-	245	8500	7700	480	640	27000	29000	590	250	430	11	35
	Exceed 1023	1.0	0.923	_	250	7300	5900	510	600	33000	35000	300	280	510	10	19
	Exceed 1327	1.3	0.927	_	253	8300	7300	600	700	45000	52000	140	160	430	11	27
	Exceed 1518	1.5	0.918	_	244	8600	7900	540	660	26000	28000	610	300	430	12	38
	Exceed 2018	2.0	0.918	_	243	8600	8000	590	690	24000	27000	580	330	460	11	37
	Exceed 2718	2.7	0.918	_	243	11000	7400	470	720	16000	19000	200	170	420	11	37
	Exceed 3518	3.5	0.918	_	237	11000	6800	510	680	16000	18000	140	190	500	11	38
	Exceed 3527	3.5	0.927	_	250	8900	5900	530	750	27000	30000	60	70	400	10	23
	Exceed 3812	3.8	0.912	_	230	6900	6300	450	610	13000	14000	610	250	440	-	_
	Exceed 4518	4.5	0.918	_	237	9700	7000	500	730	15000	18000	140	150	460	11	39
	Exceed 4516	4.5	0.936	_	257	6200	4800	580	720	54000	58000	<60	30	110	6	9.9
	Exceed 9330	19.0	0.730		237	-		-	720	J4000	-	-	-	-	-	-
	Exceed 0017	17.0	0.710		237		Pro	perties								
Enable™	Enable 2005	0.50	0.020		220	0000			710	20000	20000	240	00	F10	12	33
performance	Enable 2005	1.00	0.920	-	239 237	8800	8000	480	710	30000	29000		90	510	12	28
polymers			0.920	-		7900	7500	510	720	29000	33000	180	130	550	11	
' '	Enable 2305	0.50	0.923	-	241	8400	7600	480	730	35000	41000	170	70	620	12	29
	Enable 2703 Enable 2705	0.30	0.927 0.927	-	246	9100 8300	7500	480	750 760	45000	55000	140	40	670	11	25
	Enable 2705 Enable 3505	0.50	0.927	-	246 253	8400	7200	520 EE0	760	44000	52000 75000	130	50	730	11	24
	Enable 3505 Enable 4002	0.50	0.935	-	262	9700	6700 7000	550 490	790 810	62000 78000	110000	70 60	20 10	610	11 11	20 19
	Enable 4002	0.25	0.940	-	259				830			< 60	20		8	
	Enable 4009	0.90	0.940	-	259	8100	6300	600	030	74000	86000	< 60	20	550	0	8.7
□ Viete com ™	\/:-t 2000	2.7	0.072	C		> 2000	Pro	perties								
	Vistamaxx 3000	3.7	0.873	8	-	>2000	-	>800	-	-	-	-	-	-	-	-
polymers	Vistamaxx 3020 Vistamaxx 3588	1.2	0.874	3	-	>2100	-	>800	-	-	-	-	-	-	-	-
		2.6	0.889	8	-	3770 >2800	-	637	-	-	-	-	-	-	-	-
	Vistamaxx 3980	3.6	0.879	8	- 222	9080	- 5150	>800	790	42000	47300	-	-	-	-	-
	Vistamaxx 6000 Vistamaxx 6102 <sup>D</sup>	3.7	0.889			>1100	5150	440 >800		42000	4/300	-	-		_	-
		1.4		3	-				-	-	-	-	-	-	-	-
	Vistamaxx 6202	9.1	0.862	20	-	>800	-	>800	-	-	_	-	-	-	-	-
	Vistamaxx 6502	21	0.865	45	-	>1100	-	>800	-	-	-	-	-	-	-	-
	Vistamaxx 7020	9.0	0.863	20	717	>796	-	>800	_	_	-	-	_	_	-	-
	Vistamaxx 8380	-	0.864	-	212	3.8	-	1019	-	-	-	-	-	-	-	-
	Vistamaxx 8780	-	0.864	-	205	2.4	-	705	-	-	-	-	-	-	-	-
	Vistamaxx 8880	-	0.879	-	206	900	-	1,237	-	-	-	-	-	-	-	-

Film properties are represented according to additive used and may vary according to additive package requirements. Products may not be available in one or more countries — please contact your Sales Representative for more information. See product data sheets for additional typical properties. Typical properties are not to be construed as specifications.

All film conditions and test methods are specified in the product data sheets. Formulations and conditions will change depending on your application and formulation. Film gauge: 1 mil film for blown grades, 0.8 mil for cast grades. Vistamaxx property data tested on compression molded plaques.

A: Exceed 0019 product properties data available at  $\ensuremath{\mathsf{exxonmobilchemical.com}}$  B: TPO roofing

- C: Dart drop impact is based on ASTM D1709A, which may vary by country. D: Used to upgrade recycle for film applications.
- Please contact your ExxonMobil representative for details regarding specific technical data.

Product finder		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
						Applicat	ions										
Exceed™ XP porformance	Exceed XP 6026	•	•	•			•			•	•		•				
performance polymers	Exceed XP 6056	•	•								•	•	•				
p = 7	Exceed XP 8318	•	•								•	•	•				
	Exceed XP 8358 Exceed XP 8656	:										•	•				
	Exceed XP 8784			•							•	•	•				
	LACCEU AF 0/04					Applicat	ions										
Exceed™	Exceed 1012		_			Арріісас	10115										
performance	Exceed 1015										•				•		
polymers	Exceed 1018																
	Exceed 1023																
	Exceed 1327																
	Exceed 1518	-															
	Exceed 2018	-		-													
	Exceed 2718																
	Exceed 3518																
	Exceed 3527					-											
	Exceed 3812										•						
	Exceed 4518			•							•						
	Exceed 4536										•			•			
	Exceed 0019 <sup>A</sup>	•	•												•		
	- 11				4	Applicat	IONS										
Enable™ performance	Enable 2005	•	•	•				•	•			•		•			
polymers	Enable 2010 Enable 2305	•	•	•					•					•		•	
	Enable 2305 Enable 2703	•		•			•	•			•						
	Enable 2705																
	Enable 3505																
	Enable 4002																
	Enable 4009																
						Applicat	ions										
Vistamaxx™	Vistamaxx 3000																
performance polymers	Vistamaxx 3020																
	Vistamaxx 3588	-															
	Vistamaxx 3980																
	Vistamaxx 6000										•		•B				
	Vistamaxx 6102 <sup>D</sup>	•	•							•	•						•
	Vistamaxx 6202								•		•			•	•	•	•
	Vistamaxx 6502														•		
	Vistamaxx 7020 Vistamaxx 8380													•			
	Vistamaxx 8380 Vistamaxx 8780																
	Vistamaxx 8880																
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# Product finder

	- 12/2 /65	Features Page 1997 1997 1997 1997 1997 1997 1997 199
■ Exceed™ XP	Exceed XP 6026	Melt strength, puncture and impact resistance, toughness.
performance polymers	Exceed XP 6056	Extrudability on typical LDPE equipment, toughness, seal strength.
polymers	Exceed XP 8318	Stiffness, impact resistance, extrudability and higher heat resistance.
	Exceed XP 8358	Stiffness, impact resistance.
	Exceed XP 8656	Flex-crack, dart resistance, bubble stability.
	Exceed XP 8784	Easy extrusion, bubble stability, step-out mechanical performance, excellent sealing performance.
		Features Features
Exceed™	Exceed 1012	Low temperature toughness, sealing, impact and puncture resistance.
performance	Exceed 1015	Low temperature toughness, impact strength and puncture, heat sealing and hot tack performance.
polymers	Exceed 1018	Tensile, impact strength, puncture.
	Exceed 1023	Tensile, impact strength, puncture and excellent drawability.
	Exceed 1327	Tensile, stiffness, impact strenght, puncture, drawability.
	Exceed 1518	Tensile, impact strength and puncture and excellent drawability.
	Exceed 2018	Extrudability, tensile, impact strenght, puncture.
	Exceed 2718	Tensile, impact resistance, puncture toughness, for cast film.
	Exceed 3518	Tensile, impact resistance, puncture toughness, for cast film.
	Exceed 3527	Stiffness, tensile, impact and puncture resistance.
	Exceed 3812	Sealing, caulkability, toughness, impact and puncture resistance, for cast film.
	Exceed 4518	Tensile, impact resistance, puncture toughness, for cast film.
	Exceed 4536	Processability, stiffness, toughness, mechanical performance, hot-tack, for cast film.
	Exceed 0019 <sup>A</sup>	Organoleptics, toughness, for extrusion coating and injection molding.
		Features
Enable™	Enable 2005	Processablility, toughness, cast film available.
performance	Enable 2010	Processablility, toughness, cast film grade available.
polymers	Enable 2305	Processability, toughness, antiblock options available
	Enable 2703	Stiffness, toughness, processability.
	Enable 2705	Processability, stiffness and toughness.
	Enable 3505	Processability, stiffness and toughness, shrink.
	Enable 4002	Bubble stability, melt strength, stiffness, shrink.
	Enable 4009	Extrudability, stiffness and toughness.
	Lilable 4007	Features
□ Mistamano.™	Vistamaxx 3000	1111 11
Vistamaxx™ performance		Toughness and clarity. Mainly for PP injection molding market.
polymers	Vistamaxx 3020	Toughness, elasticity and clarity. Main grade for stretch hood films.
	Vistamaxx 3588	Sealing. Sealant resin for BOPP and cast PP films and coating of PP raffia fabric.
	Vistamaxx 3980	Sealing. Sealant resin for BOPP and cast PP films and coating of PP raffia fabric.
	Vistamaxx 6000	Toughness. Functional layer in cast stretch film to optimize holding force & tear propagation resistance.
	Vistamaxx 6102 <sup>D</sup>	Toughness, elasticity and PE/PP compatibility. Resin used in wide range of blown film applications including upgrade of PE-based recyle.
	Vistamaxx 6202	Toughness, cling, elasticity, PE/PP compatibility, enhance filler loading. Resin used in wide range of blown & cast film applications.
	Vistamaxx 6502	High flow, enhance filler loading. Main grade to improve flow in injection molding applications.
	Vistamaxx 7020	Softness. Provide soft solution in polypropylene blends for spunbond nonwoven fabrics.
	Vistamaxx 8380	Low viscosity, density and odor. Provides high polymer loading in hygiene hot-melt adhesives.
	Vistamaxx 8780	Provides high polymer loading in hygiene and woodworking hot-melt adhesives. Low viscosity, density and odor.
	Vistamaxx 8880	Low viscosity, density and odor. Provides high polymer loading in packaging hot-melt adhesives. Flow modifier for injection molding applications.

Exceed XP, Exceed and Enable performance polymers deliver excellent optical properties - different levels can be achieved depending on the film construction and formulation.

## Creating differentiated solutions. Together.



#### Performance polymers

## Exceed™ XP performance PE polymers

When eXtreme Performance matters - for step-out mechanical performance and excellent processability.

#### Exceed<sup>™</sup> performance PE polymers

Superior performance - for outstanding mechanical and sealing properties combined with best-in-class optics.

#### Enable<sup>™</sup> performance PE polymers

Optimum balance - for processing and bubble stability with HAO properties.

#### Vistamaxx<sup>™</sup> performance polymers

Elevates performance levels, processing and cost efficiencies.

#### 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<sup>™</sup> EMA

For softness, thermal stability and chemical adhesion.

## Exact<sup>™</sup> plastomers in flexible packaging

For toughness with low seal initiation temperature in flexible packaging.

#### Polybilt<sup>™</sup> modifiers

Ethylene copolymer developed for the construction industry.

#### LLDPE, LDPE, HDPE resins

ExxonMobil™ LLDPE
ExxonMobil™ NTX LLDPE
Nexxstar™ LDPE
ExxonMobil™ LDPE
ExxonMobil™ HDPE
Paxon™ HDPE



Test	Based on test method
Density Melt index (190°C/2.16 kg) Melt flow rate (MFR) Peak melting temperature Tensile strength Elongation at break Secant modulus Dart drop impact Elmendorf tear strength Puncture force Puncture energy	ASTM D1505 ASTM D1238 ExxonMobil method ExxonMobil method ASTM D882 / ASTM D638 ASTM D882 / ASTM D638 ASTM D882 ASTM D1709A ASTM D1922 ExxonMobil method ExxonMobil method
Puncture at 250% stretch, (on highlight tester, for rel. comparaison only) Cling force Unwinding noise	ASTM D4649 ASTM D5458-95 ExxonMobil method

#### Contact us to discuss your needs, visit exxonmobilchemical.com

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