

Providing film converters an easy processing option while delivering the toughness necessary in eXtreme Performance flexible packaging.

Energy lives here™



Exceed™ XP 8784 performance polymer offers a new benchmark for packaging applications requiring easy processing and eXtreme Performance in flexible packaging including laminated sacks, freezer films, barrier packaging and sachets.

This grade enables converters to easily fabricate films to protect and preserve products that need damage resistant packaging - from packing to opening.

Delivered attributes	Derived benefits & potential value
<ul style="list-style-type: none">▪ Low melt pressure and high melt strength	<ul style="list-style-type: none">▪ Enhanced extrudability▪ Bubble stability▪ High film output
<ul style="list-style-type: none">▪ Extreme dart impact and stiffness	<ul style="list-style-type: none">▪ High package integrity for fewer damaged packages▪ Downgauging opportunities▪ Less material use and waste through the value chain
<ul style="list-style-type: none">▪ Good sealing & hot tack	<ul style="list-style-type: none">▪ Better sealing performance▪ High packaging speeds

High package integrity

Exceed XP 8784 enables converters to fabricate films with eXtreme Performance by delivering exceptional dart impact and sealability (low seal initiation temperature and good hot tack strength). This delivers better package integrity and downgauging opportunities for less packaging material use and waste through the value chain.

Cost optimization

Excellent shear thinning characteristics of Exceed XP 8784 translates into low melt pressure and temperature in extrusion. High production output is also achievable from its high melt strength. This polymer grade allows converters to enhance extrudability and packers to improve productivity. The outstanding flex-crack resistance and toughness, eliminates the need for high-cost polymers and allows converters to tailor film solutions through linear polyethylene blends or downgauging.

Innovation opportunities

The melt strength and toughness of Exceed XP 8784 allows the fabrication of barrier films with eXtreme Performance or to reduce film thickness, while maintaining performance.

Sustainability benefits

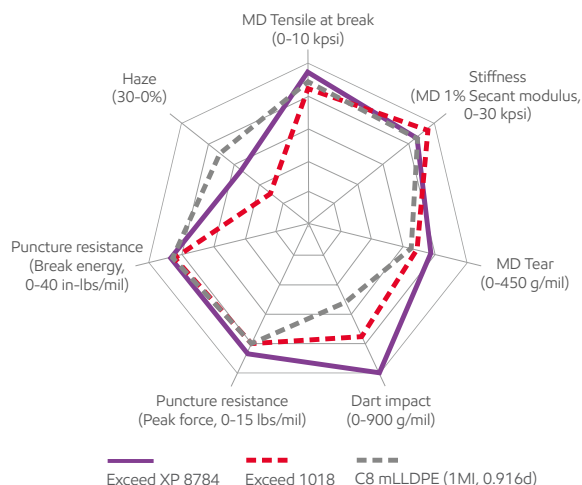
Improved puncture resistance and enhanced toughness delivers high package integrity, reducing the need for re-packaging and lessening the amount of food waste. Toughness and dart impact also allows thinner gauge films for less material use, while package integrity is maintained.

Flexible packaging applications

- **Laminated sacks:** the extreme sealability results in faster packaging speeds with extreme toughness to improve bag drop performance.
- **Freezer films:** the extreme low temperature toughness reduces package failure for less waste.
- **Barrier packaging:** the extreme stiffness/toughness balance provides downgauging opportunity with high melt strength to give good thermoformability.
- **Sachets:** the extreme toughness and sealing performance lead to extreme compression resistance with good shear thinning behavior to improve extrudability.

Figure 1:

Selected property data for film formed from Exceed™ XP 8784 performance polymer and reference films at 1 mil thickness.

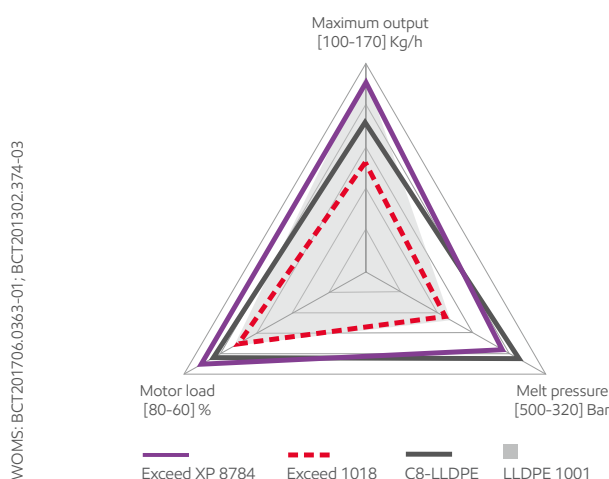


Film (1 mil/25.4 micron) made on a 2.5 inch (63.5 mm) blown film line with a 2.5:1 blow-up ratio, a 90 mil (2.29 mm) die gap at a rate of 15 lbs/hr/in die circumference (2.68 kg/hr/cm).

Testing data generated by ExxonMobil Chemical Company

Figure 2:

Selected processing data for film formed from Exceed XP 8784 and reference films at 50 µm thickness.



Film (2 mil/50 micron) made on mono layer blown film line with a 2.5:1 blow-up ratio and a 59mil (1.5 mm) die gap and 160 mm die diameter

Grades	Melt index (g/10 min)	Density (g/cm³)	Melt flow ratio (I ₂₁ /I ₂)	Distinguishing features for eXtreme Performance
Exceed XP 8784	0.8	0.914	28-32	<ul style="list-style-type: none"> • Easy extrusion, good bubble stability • Step-out mechanical performance • Excellent sealing performance

Test	Test method
Melt Index	ASTM D-1238
Density	ASTM D-4703
	ASTM D-1505/ISO 1183
Melt index ratio	ASTM D-1238
Haze	ASTM D-1003
Tensiles tests	ASTM D-882
Dart Impact	ASTM D-1709 (procedure A)
Puncture	ASTM D-5748
Elmendorf tear	ASTM D1922

Exceed™ XP performance polymers — when eXtreme Performance matters.

©2018 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 Chemical" and "ExxonMobil" are each used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliate either directly or indirectly stewarded.

Contact us for more information:
exxonmobilchemical.com/exceedxp

E0418-146E49

ExxonMobil
 Energy lives here™