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Help brand owners wrap and bundle their products using eXtreme Performance 'soft-and-secure' shrink film

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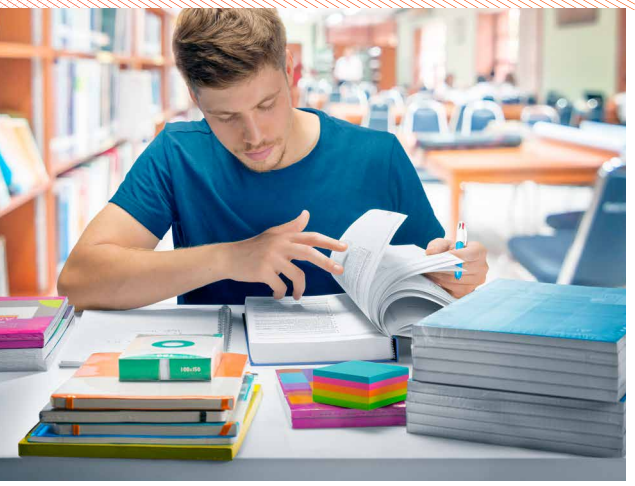

Exceed™ XP performance polymers offer a new benchmark for 'soft-and-secure' shrink film wrap, overwrap and bundle packaging solutions that require eXtreme Performance.
This new product line enables converters to fabricate 'soft-and-secure' shrink film with a controlled holding force to protect delicate or irregularly-shaped items with high integrity packaging — from manufacture to end-use.

Delivered attributes	Derived benefits & potential value
• Balanced shrink performance	• Balanced MD/TD shrinkage to protect delicate or irregularly-shaped items
• Controlled holding force	• Eliminates buckling or distortion that can damage goods • Conforming to odd shapes, these films create beautiful packaging for hard-to-package products.
• Exceptional film toughness and strength	• Excellent dart, puncture and tear resistance and tensile at break for high packaging integrity minimizing waste
• Single bubble solution with balanced shrink	• Operational stability and cost-effective option versus double-bubble polyolefin film (POF)
• Extremely high melt strength	• Increased throughput • Exceptional processing on traditional blown film lines or high-stalk equipment
• Excellent film optical properties (gloss, haze and transparency)	• Outstanding print quality, enhanced product appeal, increased brand recognition and easier bar code reading

High package integrity

Exceed XP enables converters to fabricate 'soft-and-secure' shrink films with controlled holding force and exceptional toughness that deliver excellent wrap, overwrap and bundle packaging integrity. 'Soft-and-secure' shrink films made with this polymer offers eXtreme Performance for packaging used for:

- Delicate foods and other products - pizza, meat and cheese products, bathroom and kitchen tissues
- Irregular shaped products — office supplies, stationery products and air filters

Innovation opportunities

Working together across the value chain helps us create differentiating solutions. Exceed XP allows converters to enhance their business through new opportunities, more stable operations, improved output and simplified film formulations. Converters can expand their business using existing extrusion equipment, including monolayer lines, into a market which previously required investment in new machinery.

when eXtreme Performance matters

Cost optimization

Exceed™ XP performance polymers allow converters to increase output and optimize film formulations. Exceed XP offers a new solution comprising a pure PE blend run on single bubble blown film lines compared to a typical double-bubble polyolefin film (POF) solution which requires a more costly dedicated line and higher raw material costs. Providing the required shrink performance at low temperatures can also reduce energy use for potential cost savings.

Figure 1:

Selected film property data for Exceed XP formulated films and the reference polyolefin film (POF).

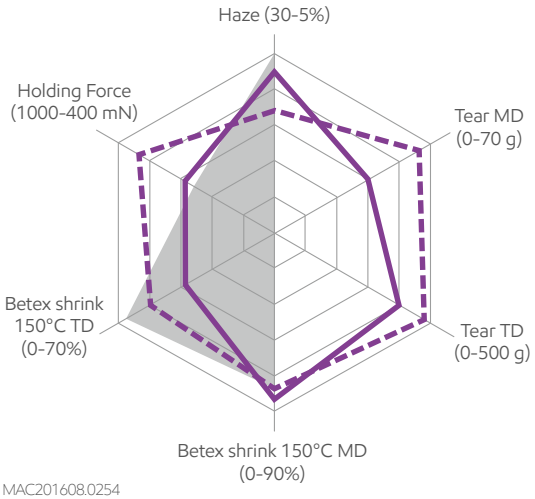

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Table 1: Product data for Exceed XP formulated films and the reference polyolefin film (POF).

	Melt index (g/10 min)	Density (g/cm³)	Exceed XP coextruded 3-layer 20 µm film			Exceed XP extrusion mono-layer 20 µm film	Reference coextruded 3-layer 20 µm film (double-bubble POF)		
Layer ratio			1	3	1	1	1	3	1
Exceed XP 6026ML	0.2	0.916		●		●			
Exceed 1018LA	1.0	0.918	●		●				
LDPE	-	-	●	●	●	●			
PP	-	-					●		●
PE	-	-						●	

Test methods based on: Total haze measurement - ASTM D1003; Elmendorf tear strength - ASTM D1922-09; Shrinkage tester (Betex) - EMC method; Shrink forces measurement by Retratech - ISO14616. Different holding force test condition of Exceed XP 6026 based mono film.

Grades	Melt index (g/10 min)	Density (g/cm³)	Melt flow ratio (I_{21}/I_2)	Slip/ anti-block	Distinguishing features for eXtreme Performance
Exceed XP 6026ML	0.2	0.916	48-52	no	Controlled holding force; balanced MD/TD shrinkage; and film toughness and strength (see figure/table above)

Exceed™ XP performance polymers — when eXtreme Performance matters.

SCAN IT 2 GET IT

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