Exceed™ XP Exceed™ Enable™
ExxonMobil™ HDPE

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Extreme performance heavy duty sack (HDS) films for improved load stability

- Step-change downgauging opportunities
- Packaging integrity, bag-drop performance for load stability
- Outstanding processing and output

Challenge:

Create thinner, tougher, high output heavy duty sacks (HDS) films with extreme performance for load stability

As part of its commitment to helping customers create differentiated solutions that add value, ExxonMobil wanted to develop a 5-layer polyolefin dedicated (POD) HDS film solution that offered extreme performance for brand owners and easier processing for converters.

Solution:

Incorporate Exceed™ XP performance polymers to deliver eXtreme Performance

Continuing their almost 20 years of collaboration, **ExxonMobil** and **Windmöller & Hölscher** have developed an HDS and Form Fill Seal (FFS) film solution using Exceed XP performance PE polymers.

The 5-layer POD HDS/FFS film is made on an OPTIMEX FFS line with inline printing, gusseting units and fast cooling. The combination of OPTIMEX FFS line technology with **Exceed XP performance PE polymers** allows extreme performance HDS/FFS to be produced in one process.

WINDMÖLLER & HÖLSCHER

Results:

100-micron HDS/FFS that offer extreme performance and outstanding output

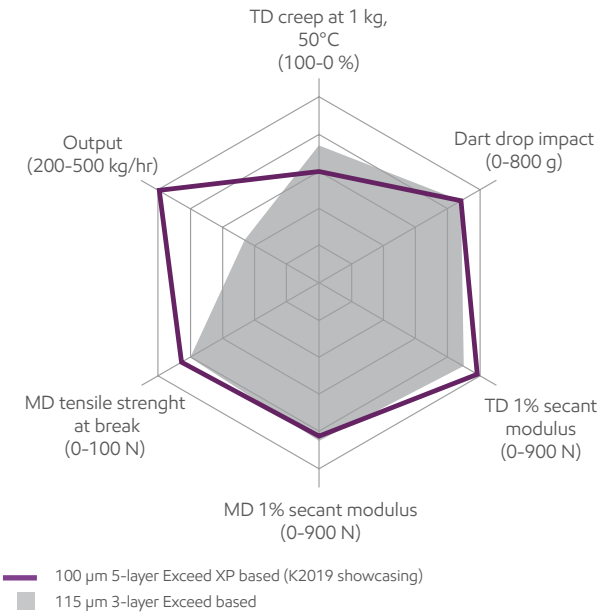
The 100-micron, 5-layer POD HDS/FFS film made of **Exceed™ XP** performance PE polymer and **ExxonMobil™ HDPE** offers extreme toughness and stiffness.

It can endure dynamic and impact loadings which may cause stress and ruptures during filling, transportation, storage and use. The bags can also withstand rough handling and storage conditions in various environments and climates. The creep resistance and bag drop performance of the bags provide optimum stability, helping to prevent toppling and improve safety. High melt strength and shear thinning melt flow Exceed XP deliver improved bubble stability and lower melt pressure, in combination with OPTIMEX technology, for outstanding processability and achieving highest output.

The combination of Exceed XP and ExxonMobil HDPE with the new 5-layer OPTIMEX FFS line delivers:

- **Step-change downgauging:** 100 µm thickness.
- **Outstanding package integrity and bag-drop:** Dart, creep, tensile modulus.
- **Excellent processability:** Output = 500 Kg/hr at a die diameter of 180 mm.

	115 µm 3-layer Exceed based	100 µm 5-layer Exceed XP based (K2019 showcasing)
Layer configuration	1/2/1	1.5/2/3/2/1.5
Skins	Exceed + Enable	Exceed XP 8318 + Enable
Sub-skins		Exceed XP 8318 + ExxonMobil HDPE
Core	Exceed + ExxonMobil HDPE	Exceed XP 8784 + ExxonMobil HDPE



All data from tests performed by or on behalf of ExxonMobil.

ExxonMobil portfolio for FFS/HDS		
Grade name	**Density (g/cm^3)**	**Melt index (g/10 min)**
Exceed XP 8318ML	0.918	1.0
Exceed XP 8784ML	0.914	0.80
Exceed 1018MA	0.918	1.0
Enable 2005MC	0.920	0.50
ExxonMobil HTA002	0.952	0.68*

* ASTM D1238, 190C/5.0 kg

Contact us for more information:
exxonmobilchemical.com/HDS

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E0919-103E49