



Recyclable* PE pouch packaging solution with ethylene vinyl alcohol for excellent barrier performance

By collaborating with the value chain, ExxonMobil is helping customers create recyclable* packaging solutions.



Recyclable*



Package integrity maintained



Barrier performance



Optical properties

*Recyclable in communities with programs and facilities in place that collect and recycle plastic film.

Challenge:

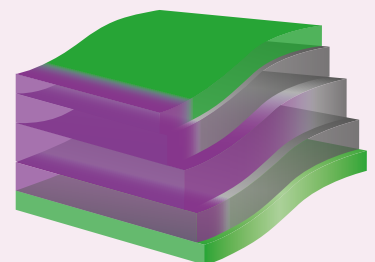
To produce an 92 % PE, recyclable pouch with high oxygen barrier properties, outstanding packaging integrity & shelf-appeal (gloss / haze)



MDO-PE layer

Thickness: 25µm

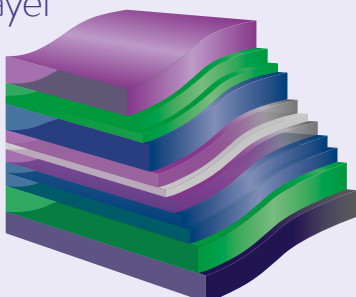
- Exceed XP 8656ML
- Enable 4002MC
- Enable 2705
- ExxonMobil HDPE



PE sealant film layer

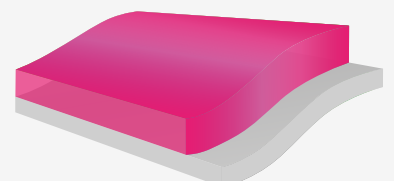
Thickness: 120µm

- Exceed XP 8784ML
- Enable 4009MC
- EVAL™ L171B
- Exceed S 9243ML
- Exact 3237
- ExxonMobil LDPE



Ink + adhesive

- Printing ink
- PU adhesive



Solution:

Though value chain collaboration and the latest performance resins, a 92% PE pouch was created with high oxygen barrier and outstanding package integrity.

The Machine Direction Orientation polyethylene (MDO PE) blown film substrate was produced with ExxonMobil best-in-class performance PE resins like Exceed XP and Enable and produced on an Alpine 5-layer line with inline MDO. This state of the art MDO technology offers film quality with outstanding processability and optimized flatness.

The sealant web was produced with a special EVAL™ EVOH high barrier resin L171B and ExxonMobil best-in-class performance PE resins like Exceed S, Exceed XP and Exact plastomer and produced on an Alpine 9-layer barrier line.

MDO PE and sealant web were then laminated to create a high oxygen barrier package with outstanding package integrity & shelf appeal.

Pouch				
Grade	Density (g/cm ³)	Melt index (g/10 min)	MDO film	Sealant film
Exceed XP 8656ML	0.916	0.5	yes	no
Exceed XP 8784 series	0.914	0.8	no	yes
Exact 3237	0.908	2.0	no	yes
Enable 4009MC	0.938	0.9	no	yes
Enable 4002MC	0.938	0.2	yes	no
ExxonMobil HDPE	0.961	0.7	yes	no
Exceed S 9243ML	0.926	0.85	no	yes
Enable 2705MC	0.927	0.5	yes	no
ExxonMobil LDPE LD100BW	0.923	2	no	yes
EVAL™ L171B (27 mol% C2)	1.21	4	no	yes

