



Sustainable Innovation in Flexible Packaging: Next Steps in the Adoption of Mono Materials

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SEPTEMBER 17, 2025

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Agenda

- Transitioning From Labels to Flexibles
- The Case for Mono-Materials
- Can Luxury and Sustainability Coexist?
- Final Thoughts
- Question and Answer

From Label to Flexibles – Key Differences

- Web handling demands tighter tension control
- Thermal management is critical with MDO-PE / BOPP films
- Regulatory: EC1935/2004, EC 2023/2006 GMP, EU 10/2011 Food
- Surface treatments and ink adhesion/application considerations

Mono-Materials: Why Now?

-  EU PPWR, plastic taxes, and EPR fees are driving 100% recyclable packs goals for 2026 - 2035 roadmaps.
-  Only ~5% of legacy multi-layer flexibles are recycled; mono-materials unlock curb-side and drop-off streams.
-  Retailer rules (Tesco, Carrefour) and CEFLEX design favour PE/PP mono webs.
-  Brands pledge 100% recycle-ready packs (Unilever, Nestlé, Mars, P&G, Colgate).



Applications That Win Early

- Dry foods, snacks, and confectionary
- Home and personal care refills
- Pet treats and dry pet food
- Mono-PP retort pouches for wet applications



Cost to Comply and Save

-  EPR fee modulation rewards design-for-recycling compliance
-  Mono-materials can reduce per kg fees vs mixed structures
-  PCR integration helps brands and converters avoid plastic taxes
-  Yield gains possible with lighter weight BOPP or cavitated films

Overcoming Technical Hurdles



Barrier Layers

EVOH or ALOX
micro-layer or coating
+
MDO-PE/BOPE
=
O₂ and H₂O barrier
rivalling PET/foil



Stiffness and Clarity

MDO-PE provides
PET-like modulus

Mono-PP laminates
mimic PET/PE clarity



Sealing Capabilities

PE or PP spouts and
zippers weld directly to
mono films

Enables pouches and
zippers



Retort Capabilities

Mono-PP pouches
survive 121°C retort

(Amcor × Nestlé Purina)



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Luxury Meets Sustainability

- In-film textures can create a premium feel without compromise
- Cavitated or pearlescent BOPP films deliver visual pop while remaining recycle ready
- Metallization on MDO-PE or MDO-PP for high-end reflective effects within DfR guidelines
- Mono-material pouches available in gloss, matt, and “paper touch” finishes that align with EU recycling standards



Brand Case Studies

Mars Snickers (CN)

First mono-PP flow wrap run on high-speed lines



Colgate HDPE Tube

EVOH/HDPE barrier passes HDPE stream tests



Nestlé Purina Retort

100% recyclable mono-PP pouch piloted in NL retail



Kraft Heinz Cap

All-PP cap could recycle 1 billion lids/year



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2025 – 2028 Watchlist

- Delegated acts for recyclability criteria due by Jan 2028
- Implementing acts for recyclability methodology and scale definitions
- Retailer-led specs tightening ahead of regulation
- PPWR drives “recyclable-in-practice” mandate by 2030
- Growth ahead: ultra high-barrier mono films, PCR-content packs, and premium tactile laminates

Q&A

