

SUSTAINABLE TIMES



American
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SUSTAINABLE GOALS ONLY 3.5 YEARS UNTIL 2025!

The Ellen MacArthur Foundation's Global Commitment and the US Plastics Pact have established several time-based sustainable goals for 2025 which include: eliminating problematic and unnecessary plastics; achieving 100% reusable, compostable or recyclable packaging; recycling or composting 50% of plastic packaging; and averaging 30% recycled or renewably sourced biobased content.

These are certainly ambitious goals but how is the industry progressing? APC is beginning to see the pipeline of commercial product introductions.

This and future articles will debut some examples of products being launched.

DESIGN FOR RECYCLE packaging is one of the sustainable development focuses. For this category, there are two primary material types which include PE film-based developments

DESIGN FOR RECYCLE

Product Highlights

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that are designed for the front of store drop-off recycling stream and the newer category of paper-based developments which can be recycled alongside other paper goods in the residential curbside recycle stream.



DESIGN FOR RECYCLE PRODUCT HIGHLIGHTS

CARGILL TRUVIA POUCH



This stand-up pouch had previously been a rotogravure printed, reverse printed, adhesive lamination of PET and HDPE. The laminate provides high-moisture barrier to preserve the product, high-quality

graphics, and package integrity to protect the product through handling and distribution.

The transition from the current laminate to a design for recycle laminate had many considerations. Transitioning to a PE print web can be challenging as the PET used on the outside of the current pouch offers great heat resistance, machinability, stiffness, and great clarity for graphics appearance. PE print webs are typically hazier, less heat resistant, less dimensionally stable, and more challenging to match the performance of a PET film.

To optimize the pouch, an oriented HDPE print web was chosen while utilizing the existing sealant web. The orientation process employed on the PE print web imparts greater clarity for the graphics, stiffness, and improved

machinability.

This product launch was a success and additional products are transitioning to this laminate. This development benefited from the use of APC's new W&H rotogravure press designed for handling the less dimensionally stable PE print film aiding in reproducing the high-impact graphics required on the current pouch. APC's How2Recycle precertification of the laminate facilitated the customer obtaining the How2Recycle logo for the pouch.

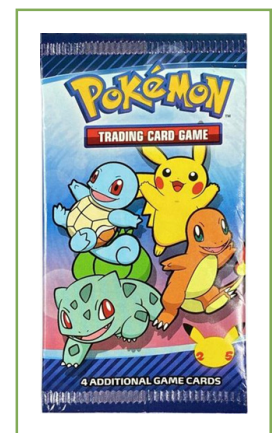
POKÉMON TRADING CARD OVERWRAP

The traditional overwrap for this application was a film to film lamination of OPP to MetOPP.

However, this laminate is not recyclable and the desire for this promotion was to create a paper-based, recyclable wrapper.

To qualify a laminate for this new category, APC needed to submit candidates for repulpability testing ensuring that 85% of the paper fibers could

be recaptured in an industrial paper recycling operation. This also required investigation of new paper coating technologies that provide functionality such as heat sealability to the



DESIGN FOR RECYCLE

PRODUCT HIGHLIGHTS CONTINUED

paper while also facilitating fiber separation in recycling.

Within a few short months of learning about this opportunity, APC had developed the first successful trial materials. The laminate was trialed on the customers equipment and converted at the targeted rate of 300 packages per minute.

The resulting laminate is a rotogravure surface printed 45# paper with an applied sealable coating on the reverse side for sealability. Testing has shown that this laminate offers repulpability at levels of >90% fiber recapture which is well above the industry standard. This product line continues to show strong growth.

ALEXIA FROZEN POTATOES



The inclusion of *bio or renewable content* is another important sustainable strategy depicted in this next package. These materials are beneficial as they can provide a means of eliminating the need for fossil feedstocks

often reducing greenhouse gas emissions. In this next example, Lamb Weston introduced renewable content into their Alexia Frozen

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Sustainable Times is a quarterly newsletter compiled by American Packaging Corporation that is designed to educate, provide industry highlights and keep you informed of sustainable

Potato package.

The current laminate for this pouch is manufactured at APC's Story City, IA facility and is a flexographically printed lamination of OPP to LLDPE. The challenge for this development was to add renewable content without impacting the package performance for this frozen potato product which had been specially modified to enhance the level of puncture and tear performance.

After several trials, the optimal formulation was chosen which performed optimally for durability while achieving targets for sustainability. In this case, we were able to incorporate 16% starch into the formulation. Another interesting part of the story is that the starch used in the package is generated from the processing of potatoes and typically considered a waste product. The supplier of the starch compound employed special drying and compounding techniques facilitating its compatibility into the current sealant formulation.

In this case, 8,928# of PE was replaced with bio-based material savings an estimated 6.5tons of carbon emissions. This is equivalent to 14,700 miles driven, 750,000 phones charged, or 14 barrels of oil.

Upcoming in the next edition: Paper-based recyclable pouch debut and a multi-material laminate pouch with PCR content.

solutions being developed by APC. If you have any questions, please feel free to contact your sales representative or Jeff Travis at jtravis@americanpackaging.com.