

A More Sustainable Wrap for the Paper Straw

A Packaging Design Project for Tetra Pak

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Straw's wrap.... We don't think too much about them before we sip our frosty drink from a beverage carton. After a big struggle of opening the wrap, we look where to toss the wrap... That could make them a common piece of litter. Almost 70% of globally plastic waste ends up as litter or gets stuck in the natural world. Unfortunately, these seemingly harmless plastic wraps are damaging to humans, animals and our planet.

WHAT CAN YOU DO?

Fortunately, there is a solution to this problem. The Pull-Strip wrap stops littering by keeping the parts attached on package while helping you to open the wrap easily. It also provides as a more sustainable alternative to the current plastic wrap.

The sustainable wrap for the U-shaped paper straw is developed and selected among 16 different design solutions. The Pull-Strip wrap is evaluated in the user tests and finalized as the best possible solution for its users and for the environment.

The Pull-Strip wrap is designed as a package for U-shaped paper straws. It easily opens and takes the U-shaped paper straw up when the strip is pulled by smooth sliding from the slipcase. It also prevents littering by keeping the parts attached to the package and ensuring the wrap is recycled along with the rest of the package in the same waste stream. The main wrap material is made from paper as a natural renewable source and as

the U-shaped straw is made from. The wrap's material variety is similar to the beverage carton and U-shaped paper straw materials that would increase the overall collection rates per materials in their waste management stream.

The way the straw is attached to the package eliminates fossil-based adhesive, as it is attached today. The new attachment reduces the plastic content of the unit package. The material, sealing and functionalities of the Pull-Strip wrap promote the improved recycling activities in the waste management stream.



Figure 1: The Pull-Strip wrap

<https://www.youtube.com/watch?v=MvojkeG0vMA>

In the continuous wrap of the straw, the suggested new configuration of the straws facilitates 16% more efficient material and volume utilization in bulk loading. The final design solution of the wrap can be manufactured in the existing wrapping line with implementing the suggested minor adjustments in the machinery.