

Recyclability of Cartons

Different legislative initiatives, requirements from within the own paper and board supply chain and market demands are ever more bringing the recyclability of the paper and board products to the forefront of the sustainability debate.

The key objective of the Circular Economy Package (CEP) adopted the 22nd May 2018 is to move away from linear consumption patterns (produce, use and throw away) to circular processes (production, use and prepare materials for a new cycle).

This means packaging needs to be eco-designed, the present materials should be appropriate for a safe reutilisation after the use phase of the pack.

The CEP sets higher recycling targets for the different packaging materials, with for paper and cardboard a recycling target of 75% by 2025 and 85% by 2030. Additionally, the CEP promotes the introduction of incentives towards more recycling, such as the eco-modulation of the green dot fees paid by the packer fillers to the Extended Producer Responsibility (EPR) schemes.

Another piece of legislation at the EU level is the so-called Single Use Plastics Directive (SUP), adopted the 21 May 2019.

This initiative is related to marine littering and includes measures against the 10 single use plastic items most found on the European beaches. Amongst those items are for instance the plastic cups and food containers for consumption on the go.

Starting from a measure for plastic items, the scope widened in the course of the political debate towards also products containing plastic components, thus involving the paper cups and cardboard food containers with a plastic layer on.

Member States shall take measures to reduce the consumption of such items and those measures shall achieve a measurable quantitative reduction in the consumption by 2026 compared to 2022.

From within the paper and board supply chain, the waste management companies were confronted with the very strict Chinese quality rules on the import of recovered paper since early 2018. Mixed grades are not imported anymore, while for the still allowed sorted waste paper categories the accepted contamination was reduced to the very low 0,5% level.

This has been impacting the European recovered paper market seriously. With a recovered paper collection of 57 Million T and a net export of 8 million T an oversupply is occurring and in such a context the mills can be more selective in the qualities they are buying.

At the board mill end there is also the fear, the lower qualities which went previously to the Far East will now ever more stay in Europe and how the legislative initiatives will lead to more composite paper and board articles as a substitute for plastics.

It needs to be stated that there has also been a price effect of the Chinese measures. The mills can now buy recovered paper at a much lower price and the pulper rejects they are complaining about are certainly not only related to the presence of layered paper and board articles!

The contamination of the recovered paper flow has many other sources such as the ongoing comingled collection of paper and board in certain countries and the increased anonymous underground collection in large European cities.

A presence of 2% cartons with a 10% plastic layer on, in the mixed paper coming from households is strictly speaking leading to a non paper contamination of 0,2%.

Some customers are really committed to sustainability, others are just using the anti-plastic wave for marketing reasons. Especially those taking it serious want to be sure the introduced alternatives fulfill a number of criteria such as a proven recyclability.

Technically there is no reason to ban all plastic layered cartons from the regular recovered paper flow. Clean cartons with a layer on one side are currently well recycled in standard recycling mills. During the stock preparation and in the pulper, water has access to the fibers.

This type of material should thus not be collected in a separate stream within a type of mixed lightweight packaging flow or together with the beverage cartons, for sorting and delivery to specially equipped mills. Such a collection would lead to a higher contamination of the fibers and would also seriously increase the green dot fees paid by the customers.