PAPER IN TIGERISH MOOD

The need to move away from linear economy models is focusing minds in the paper innovation on new opportunities for recyclable barrier papers. Dr Dieter Becker, director CSR & new business development, at Mitsubishi HiTec Paper Europe GmbH, surveys the industry outlook.

How has the paper industry viewed the debate about plastic waste over the last year or so?

This topic has haunted the paper and board industry already quite a while. We consider these challenges as a huge opportunity to increase market share with barrier coated fibre-based products.

Where are the opportunities for fibre-based packaging to replace plastics?

In broad terms there are many opportunities to partially replace non-recyclable polyethylene coated or multi-layer laminated flexible packaging material with modified and fully recyclable fibre-based materials. These steps offer alternatives to heat-sealability and functional barriers against water, water vapour and grease, as well as effective gas barriers against oxygen and volatile mineral oils.

What are the limitations of paper – and to what extent can innovation overcome these?

Plastic foils and laminates are traditional products in the market and the production machines are well adjusted to those materials. Paper products do have their own fingerprint and production machines sometimes need to be adjusted when the production cycle rate is at the high end. Plastic foils are very flexible and smooth while papers are more stiff and brittle. Machines will be adjusted to barrier papers and barrier papers using more and more renewable and better suited raw materials to achieve similar properties. Surface evenness will be improved via curtain coating application which can achieve film like surfaces.

Could you discuss the different types of coating that can be added to papers to add barrier properties?

Theoretically, papers or board do have the capability to use special fibres or adsorbers to achieve barrier properties already in the web. Specialised functional coatings with different technologies like bar, air knife or curtain coating can apply aqueous based coating recipes using a wide range of different materials, like natural waxes or dispersions. Different barrier properties can be adjusted with the right choice of water-based barrier materials and their combinations.

How does adding a functional barrier to paper impact on its recyclability or compostability?

Water based barrier coated papers do normally show a full recyclability. Most of the barrier papers are almost 100 per cent recyclable. The amount of renewable materials will be steadily increased.

In which applications do you expect to see paper capture market share from plastics?

Paper with functional barriers could capture market share in the fields of wrapping papers, pouches, sachets like sugar sticks, straws, bags, chocolate, dry and fatty food stuffs and in a lot more possible applications. Challenging will be applications, in which the packaging has to withstand a positive pressure over a longer period. □