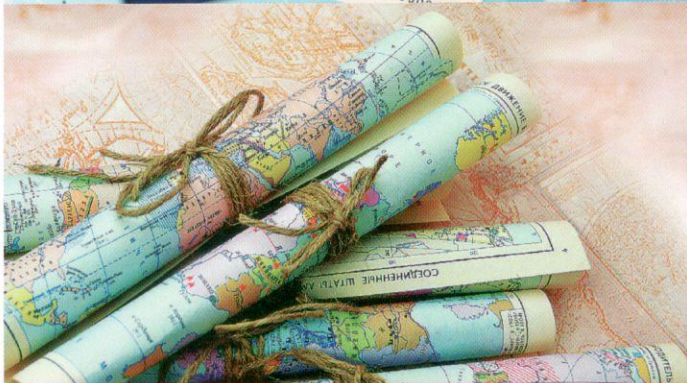


# THE PACKMAN

India's Premier Magazine for Modern Packaging

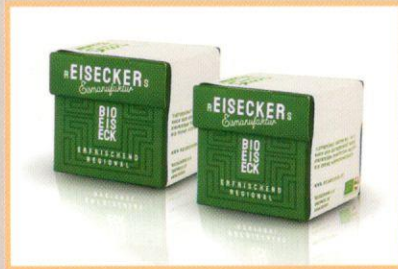


## COSMO SYNTHETIC PAPER

STEERING INNOVATION IN THE PRINTING INDUSTRY



Bobst's Vision K5 HS metallizer to be assembled in Pune



Behind a carton – ice cream packfection



Edible packaging – the packaging designed to disappear



**SCARA**  
Why Interface When You Can Integrate?

One Supplier - One Controller - Multiple Drives - Multiple SCARA  
Contact Trio to find out how our motion-first engineering approach can deliver productivity to your machine.

TRIO MOTION TECHNOLOGY | [WWW.TRIOACTION.COM](http://WWW.TRIOACTION.COM)



**TRIO**  
MOTION TECHNOLOGY  
A MEMBER OF THE ESTU GROUP

ACHIEVING TRUE CIRCULARITY IN ASEPTIC PACKAGING

# UFlex's enzyme-based aseptic packaging recycling plant in Gwalior

Our editor, Mahan Hazarika, recently visited UFlex's state-of-the-art aseptic packaging recycling plant in Gwalior. The plant utilizes enzyme-based delamination technology to recycle aseptic packaging materials. The choice of Gwalior for establishing the aseptic packaging recycling plant was influenced by UFlex's existing land availability and access to the requisite water resources.

**A**t UFlex's aseptic recycling facility, the paper component of the aseptic packaging material undergoes pulping and transformation into recycled paper products, while the plastic and aluminum foil are heated to 140 degree Celsius and utilized in the manufacturing of new plastic products.

Jeevaraj Pillai, chief sustainability officer and president of flexible packaging business and new product development, UFlex, emphasized the potential for recycling the paper component, which accounts for 70% of the total composition. This paper can be extracted and reintroduced into the recycling process, often used to

create paper-based laminates. The recycling potential is substantial because this aseptic material is not currently recycled in large quantities, and there is a lack of available technology for recycling this material.

Pillai underscored the importance of taking action now, especially with the aseptic packaging industry growing at a robust 15 to 17% CAGR. Without intervention, the environment could soon be inundated with aseptic packaging materials.

UFlex presently holds a modest share in the global aseptic packaging market, responsible for 15 billion packs out of the approximately 335 billion packs

sold worldwide. Nevertheless, the company harbors ambitious aspirations to increase its contribution substantially, aiming to reach 50 billion packs within the next three to four years. "Our immediate goal is to ensure the recycling of all the aseptic packaging materials we introduce to the market," said Pillai.

## ACHIEVING TRUE CIRCULARITY

"Achieving true circularity involves a continuous process of recovering pulp, transforming it into paper, and repeating this cycle indefinitely. In this process, the recycled pulp is combined with freshly produced virgin paper, which is then used once more in aseptic



UFlex's aseptic packaging recycling plant in Gwalior. Photo: The Packman

packaging material manufacturing. This continuous loop is a vital aspect of genuine circularity, ensuring that materials are not simply recycled for the sake of it but are utilized within the same industry to create the same type of product," said Pillai.

"The primary challenge with hydro pulping recycling (conventional recycling) is the low yield, with only 45 to 48% of the paper components typically recovered, despite paper comprising 70% of the aseptic packaging material. This results in a poor yield, with 20 to 25% of the material still being disposed of in the environment. Furthermore, the quality of the pulp extracted through hydro pulping is suboptimal, characterized by short fibers – fiber length is crucial for paper quality," Pillai emphasized.

In response to this challenge, UFlex took a unique approach and enlisted the expertise of accomplished enzymatologists. These experts developed a blend of enzymes, essentially a cocktail of enzymes, that effectively facilitates the recovery of pulp without compromising the fiber length. This innovative solution has resulted in nearly 100% yield, ensuring the recovery of almost the

entire quantity of paper, which can then be reintegrated into the system for similar applications.

"The role of enzymes in this process is paramount. While hydro pulping technology has existed, what we have introduced as an additional step is the use of enzymes to recover the pulp without the need for mechanical beating," Pillai explained.

## INDIA NEEDS 20-30 ADDITIONAL ASEPTIC PACKAGING RECYCLING PLANTS

UFlex is in the process of increasing the capacity of its aseptic packaging plant in Sanand by almost 50%, which means the company will be adding another aseptic packaging recycling plant in the near future, revealed Pillai.

"As of today, we produce approximately 15 billion packs annually. Only about 20% of these are collected and recycled, while the rest end up in the environment. This is a concern, and our aim is to ensure that all of these materials are collected and recycled. To achieve

this, we would require a network of at least 20 aseptic recycling plants across the country," said Pillai.

## CHALLENGES

Presently, investments in the recycling industry are not recognized as CSR activities. This poses a challenge because, in most cases, when given the choice between investing in their core business and recycling, companies tend to allocate resources to their core business. Thus, Pillai emphasized that introducing incentives or motivations through CSR can significantly contribute to establishing a circular economy in the country.

Furthermore, addressing GST benefits related to recycled pulp is essential. Currently, recycled pulp is treated as a finished product and subjected to the same GST as new materials. To stimulate greater involvement in recycling infrastructure, attract company participation, and engage brand owners in recycling efforts, it is imperative to provide appropriate incentives. These incentives may take the form of CSR initiatives, GST benefits, or other production-linked incentives for recycling technologies. ■

## SUSTAINABILITY IN ACTION

# Apple's bold step towards eco-conscious packaging

Apple is taking significant steps towards reducing its environmental footprint by introducing downsized, fiber-based, label-free packaging for its new Apple Watch line. This move aligns with the company's ambitious goals of phasing out plastics and decarbonizing its operations by 2025 and 2030, respectively.

A remarkable 96% of Apple's overall product packaging now consists of recycled and responsibly sourced wood fiber. To further enhance its environmental efforts, Apple has joined forces with The Conservation Fund and WWF to manage over one million acres of working forests in the United States and China. These collaborations have provided a sustainable source of fiber that matches the quantity of new wood fiber used in Apple's packaging last year.



In addition to using more sustainable materials, Apple has revamped components such as trays, plastic wrap, and foam cushioning to improve recyclability. These

new fiber-based materials can easily break down in mixed-paper recycling streams.

The recent announcement of the new Apple Watch lineup, touted as the company's first carbon-neutral products, comes with a promise of individual emission reductions of 75% due to their design and reliance on clean energy. As part of this commitment, Apple has revealed that its packaging will be entirely fiber-based. Similarly, the packaging for the iPhone 15 is reportedly over 99% fiber-based, bringing Apple closer to its target of achieving plastic-free packaging by 2023.

However, it's worth noting that Apple clarifies that its US retail packaging is assessed by weight, excluding adhesives, inks, and coatings from both the weight and plastic content calculations.