

Quality enhancements, CO2 reductions and total system cost reductions with bio based latex solutions in high quality graphic packaging

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Abstract

High quality graphic packaging producers are continuously seeking innovative technical solutions that deliver strong sustainable benefits without compromising print performance. EcoSynthetix has worked with several leading producers to deliver a powder-based latex system that meets the goals and allows substitution of substantial volumes of price volatile oil-based latex.

The binders are derived from renewable, sustainable, raw materials and produced through a unique manufacturing process. They behave just like oil-based latex as they are composed of insoluble particles when in suspension. In addition to providing comparable dry binding strength they act as co-binders, providing a degree of water retention and viscosity control.

The bio-based binder system has been shown to deliver additional technical benefits, in addition to ensuring comparable printing and adhesion performance. Being non-oil based, the binders are recyclable and repulpable with a very low CO2 footprint and so are much friendlier to the environment.

The new binders allow the producer to reduce complexity and reduce expensive ingredients by working as a total binder system rather than a single latex replacement. The new concept can achieve higher coating solids, reduced drying energy coupled with the reduction of expensive rheology modifiers and OBA carriers.

This paper will review the critical learnings of the success stories, giving actual examples of the results and benefits achieved and how they can be translated into practical applications in other packaging boards and printing grade papers.