Sustainability for the future

Sustainability is shaping the future of flexible packaging through offering many benefits compared to other packaging formats. Benefits include resource efficiencies, package weight reductions, extension of shelf life, and a decrease in the amount of materials in the landfill. There are ways to make your packaging more sustainable in the marketplace.

One way to create a more sustainable solution is through Two Component (2K) inks / coatings or other Overprint Varnishes (OPVs). Siegwerk has tailor-made offerings that have the ability to replace more complex structures with simpler mono-film technology - making packaging easier to recycle without losing the functionalities required in food packaging. This solution can be completed with 2K or OPVs in solvent-based, water-based, or energy curable technologies. All of these solutions are more sustainable alternatives, while enhancing the customer experience through unique shelf appeal.

Another possibility are Barrier Coatings which allow the use of multi-functional thin layers that can replace multi-layer or “heavy” structures. This reduces the amount of packaging materials, while keeping the functional properties of the final package and also extending shelf life of the package contents. Furthermore, if used as laminate component, there is an opportunity for the package to be recyclable due to the likeness in material or the replacement of lamination entirely and moving to a surface print structure.

Efforts in the circular economy

There has been a growing interest in creating a circular economy in packaging. The idea of a circular economy is to design and manufacture product in a way that can be recycled into new raw materials at the end of their life cycle rather than disposing of them.

Siegwerk is a member of CEFLEX and is committed to actively drive the development of advanced flexible packaging solutions to further strengthen the circular economy approach.

Read more about our participation
Next generation of flexible packaging

**EB 730** solution utilizes a hybrid Electronic Beam (EB) curable ink coupled with an overprint varnish to create a unique package with sustainability in mind.

EB 730 can be printed in sequence without being fully cured until exposed to an EB unit downstream in the printing process. This ink system is designed for applications requiring high heat, chemical and physical resistance properties. It is capable of replacing reverse print lamination with surface print structures. It provides a simplification of substrates and potentially down gauging of film structures bringing an opportunity to be more sustainable solution.

EB 730 can replace ink solutions for either water-based or solvent-based depending on the end use and printed on flexo presses equipped with a single EB curing station.

When tested, results have shown:

- Up to 80% reduction in solvent emissions as compared to traditional solvent-based ink technology
- 50% reduction in ink consumption keeping the applied costs of this technology comparable to solvent-based ink technology
- Provides lower energy consumption as interstation heat is not required and is cured by a single EB unit

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**Wash away inks for label applications**

Helping further shape the future of packaging through innovative and sustainable ink solutions

Siegwerk is driving the development of eco-friendly inks and enhancing the ecological footprint by working on de-inkability. De-inking or wash away inks are where the ink is separated from the substrate in a caustic bath before recycling. This new solution is gaining favor by brand owner applications. With the ink removed from the substrate and the use of a single film package, a completely recyclable package is a real option. Wash away technology is available in solvent-based and UV curable options today.

This process meets the stringent APR recycling guidelines.

Ink remains intact once removed from substrate and will not resolubalize in the solution.