RethINKing packaging for a circular economy

Inks and coatings play an important role for the realization of circular packaging solutions as they support the reduce, reuse and recycling of packaging. That’s why we are actively driving efforts to close the gaps of certain materials and improve their properties to achieve recyclability. For this to become a reality, packaging needs to be rethought based on “Design 4 Less” and “Design 4 Recycling” solutions.

**DESIGN 4 LESS** means meeting the demand of using less packaging by eliminating components and substituting it with renewable materials, but also introduces new business models for reuse concepts. There are already some greatly improved packaging solutions on the market including: wrapper-less ice cream, paper-packed snack bars, refillable packs and transparent mono-plastic packaging.

**DESIGN 4 RECYCLING** aims at increasing the recyclability of packaging by rethinking its design, e.g. by moving from multi-material to mono-plastic packaging or phasing out of materials like PVC.

Through this new way of thinking, packaging is made to transform into a circular model. We are constantly working on new sustainable ink technologies to further expand our circular solution offerings and enable new circular packaging applications.

**APR recognition for deinking technology for improving the recyclability of PET bottles**

We have developed a proprietary washable ink technology that enables deinking of UV/LED-printed PET shrink sleeves allowing for a recycling of the sleeve along with PET bottles using our AQUANTUM Alkali Strippable Primer and SICURA UV/LED ink technology. This technology has been accredited by the Association of Plastic Recyclers (APR) as the first UV/LED solution of its kind by the association that meets its guidelines for the quality improvement of recycled PET bottles.
NC 270 receives Material Health Certification GOLD from Cradle to Cradle Certified™

We have partnered with Werner & Mertz and Mondi to pioneer the NC 270, a flexographic, solvent-based ink system that can be used to print polyolefin plastic sheeting such as polyethylene and polypropylene. It also is suited to the stability and resistance properties required for a stand-up pouch.

This project was designed from the start to go into a closed material cycle and does not pose a risk to human health and the environment. Sustainable and healthy raw materials are just as important as the recyclability after its use phase. That’s why, in addition to the bottles and caps made of recyclates, sustainable printing inks are critical for a product’s recyclability.

With the Material Health Certification (MHC), the safety of the ink (NC 270) is confirmed scientifically for biological cycles. Gold certification is awarded exclusively to products that "do not contain carcinogens, mutagens or reproductive toxicants with plausible exposure routes," according to the MHC.

NC 270 offers:
• Good printability of colored inks and high white ink opacity
• High bond strength values for laminated structures
• High scratch/scuff resistance and constant COF values for surface printing

Joining forces along the value chain

A circular packaging industry needs innovation as much as it needs collaboration along the entire packaging value chain. We understand the importance and that is why we are actively contributing our expertise to different initiatives that are driving circular economy. Today, we already have a strong partner network and integrated know-how along the packaging value chain with these great associations.

Have questions? Want to learn more? Go to our website or contact info.us@siegwerk.com