INTRODUCING EB 730 – EB FLEXO INK SOLUTION

EB 730 & Its Advantages

The EB 730 solution is a hybrid EB curable ink system allowing the ink system to be printed in sequence without being fully cured until exposed to an EB unit downstream in the printing process. What makes the EB 730 inks special you ask? The utilization of a hybrid EB curable ink coupled with an overprint varnish creates a package with multiple key advantages.

With sustainability as an end goal, rigorous testing of the technology has been completed on a hand full of applications. Key advantages discovered during the testing of these specific structures included:

**Outstanding Physical Properties:** The unique EB ink system (EB 730) provided by Siegwerk (coupled with the EB overprint varnish) showed high physical properties as compared to standard solvent-based ink and coating solutions. Scuff, abrasion, chemical and heat resistance of this ink system and varnish are superior to that of a standard solvent-based ink solution.

**Lamination Replacement Potential:** With the high physical properties demonstrated, lamination replacement becomes an option for the overall structure providing a sustainable option for recyclability as there is only one film required in the structure. Additional impacts include relief in costs of film, processing time and lamination equipment/supplies.

**Embraces Expanded Gamut (ECG):** ECG allows for quick job change over time. With ECG, inks can remain in the sump thus creating less waste in start-up material while trying to achieve color on press.

**High Color Strength and Solids Content:** The EB 730 ink system provided up to 50% reduction in ink consumption keeping the applied cost of this alternative technology comparable to that of standard solvent-based ink technology.

**Less Dot Gain:** Testing showed 50% less dot gain allowing for higher contrast, brightness and smooth vignettes/gradients/blends.

**Reduction in overall energy consumption:** While interstation dryers blowing room temperature air is needed, no heat is required thus keeping energy costs down. When compared to a standard UV technology, EB 730 technology is cured by a single EB curing unit downstream thus allowing for lower energy consumption and proving to be a competitive alternative solution.
EB 730 & Its Advantages Continued...

Low-to-No Residual Solvents: In testing to date, up to an 80% reduction in solvent emissions were experienced as compared to traditional solvent-based ink technology. This reduction in solvent emissions can lead to lower energy costs associated with solvent incineration and VOC destruction/collection. The potential elimination of these added costs also exists.

FDA Compliant: To date, all applications tested have met migration limits established by the Ramsey proposal making these materials FDA compliant. With this said, the EB 730 ink system used in conjunction with an overprint varnish have low odor and extractable levels making this technology ideal for food packaging applications.

EB 730 inks were developed in response to a joint development project that has been worked on by a core group of players through the converting supply chain including a brand owner, a printer/ converter, and a team of co-suppliers including ESI supplying the electron beam, Henkel providing the EB overprint varnish, and Siegwerk supplying the EB inks. Each company brought its own products and expertise to the table allowing for a true collaboration. Over the four year span, teams of chemists and printing/converting experts worked to prove that for the brand owner’s applications chosen, this new flexo EB curable ink and application process are viable solutions.

“The outstanding end-use properties exhibited by EB 730 inks makes it a sustainable solution to rival conventional solvent-based or water-based inks today for some applications on an applied cost basis,” states Dr. Scot Pedersen, Head of R&D for Siegwerk CUSA. “The drastic reduction in VOC emissions by the EB 730 inks is a step-change in flexographic printing. In overseeing R&D efforts for Siegwerk CUSA, we work to provide the next generation of safe, innovative and sustainable solutions to the market place thus changing tomorrow.”

DES MOINES RECEIVES ECONOMIC IMPACT AWARD

The Greater Des Moines Partnership and the Des Moines Business Record presented Siegwerk’s Des Moines facility with an Economic Impact Award at a reception held on October 15th, 2018. This award, given out annually, recognizing companies for specific business practices.

“It was an honor to accept this award on behalf of Siegwerk for our efforts on the new warehouse and be recognized for our contribution towards economic growth in the area. I am excited to what the future holds for us.” stated Earl Whipple, Regional CFO.

For more information, email info.us@siegwerk.com
SIEGWERK PARTNERS WITH CLEMSON UNIVERSITY’S SONOCO INSTITUTE TO SHAPE PACKAGING OF TOMORROW

From its earliest inception, Clemson University has been focused on research and education that impact economic and social well-being. Since Siegwerk’s beginning in 1830, the focus has been on providing innovative and sustainable ink solutions. With these similar goals in mind, Clemson University’s Sonoco Institute will be partnering with Siegwerk over the next five years to develop the next generation of printing and ink technology through the newly commissioned, Siegwerk Inks and Coatings Laboratory.

The Siegwerk Inks and Coatings Laboratory will be part of the Sonoco Institute of Packaging Design and Graphics that will provide the faculty, staff and students access to best-in-class ink technology and ink management processes by:

- Supporting to build capabilities in innovative package design through ink technology
- Enhancing capabilities to explore visual appearance and functionality of packaging in terms of inks and coatings
- Guiding research in energy curable technologies
- Participating in a network of academic and industry partners

In addition to a financial donation in support of the overall program, Siegwerk will have the privilege of helping to shape the future talent of the printing and converting industry. With approximately 350 students currently enrolled in Clemson’s Graphic Communications program, these students will be able to gain real world experience through internships and exposure to ink formulation, end use specifications and testing for the packaging of today and tomorrow. Annually, a Graduate Assistant will be assigned to oversee all activities in the laboratory gaining in-depth knowledge regarding Siegwerk inks and future research projects.

“We are very excited to have Siegwerk as an integral part of our team - they bring a perspective and knowledge base that are critical to the success of the institute, and we greatly appreciate their willingness to participate,” commented Chip Tonkin, chair of Graphic Communications and director of the Sonoco Institute.

“The ink industry isn’t necessarily a first job choice for those coming out of college, Siegwerk hopes to change this perception,” states Dave Hiserodt, president Siegwerk US and Canada. “Working with the Sonoco Institute will be a mutually beneficial partnership for both organizations by building careers in ink for the next generation.” Siegwerk will also have the opportunity to serve on the Sonoco Institute Industry Advisory Board thus bringing industry perspectives to shaping future industry experts. Lastly, this venture provides Siegwerk the opportunity to further join forces with industry co-suppliers and innovation leaders to grow a productive and collaborative partnership industry-wide. Hiserodt adds, “Siegwerk is a sixth generation, family owned business. Collaborative efforts such as this partnership, ensures Siegwerk’s long lasting future of providing innovation, safe solutions for years to come.”