

News Release

Study shows enormous savings potential in packaging printing: Propyls from Oxea replace conventional solvents 1:1

Monheim am Rhein, Germany, March 27, 2018 – More sustainable and economical printing is easily possible by simply replacing the solvent system. This is shown in a recent study. It was carried out at the Hochschule der Medien (HdM), Stuttgart, Germany, in the Rotogravure working group of Professor Armin Weichmann at the Faculty of Printing and Media and at the DFTA Flexographic-Printing Competence Center. The scientists replaced conventional ethanol / ethyl acetate blends (Ethyls) 1:1 with a blend consisting of n-propanol / n-propyl acetate (Propyls) and retained all other printing press parameters. The study included industrial scale test runs under laboratory conditions with 17,000 m run length in flexographic printing, and 10,000 m run length in gravure printing. The result: Printing processes based on Propyls offer decisive advantages over conventional Ethyls. The savings potential of 30 percent on average in solvent consumption and 20 percent on average in the consumption of printing inks, as shown in industrial studies conducted by major customers of the chemical company Oxea, was verified in the Stuttgart test runs. Other important advantages such as reduced residual solvent content, reduced ink foaming in flexographic printing and the ability to dispense with retarders such as ethoxypropanol have also been reproduced.

"The results of the HdM study validate all of our experiences to date: Propyls surpass conventional solvents such as ethyl acetate and ethanol in gravure or flexography processes without the need for further adjustments," said application engineer Dr. Jens Klabunde from Oxea. In several international industrial studies, Oxea's global lead for Propyls project Lucia Paniagua has accompanied the exchange of Ethyls by Propyls at converters and printing plants with production runs of up to 2,000 km: "In all cases, considerable savings in printing ink and solvents were achieved, mostly with higher print quality. Other advantages such as increased overall process stability and increased performance due to less waste and higher printing speeds are perfect arguments that will motivate printing companies to use Propyls instead," she stated.

Propyls reduce the so-called plugging (drying out). As a medium evaporating solvent, they evaporate more slowly than Ethyls but ensure that the ink dries reliably in the process. It means that less post-dosing is required in the printing process, resulting in generally lower emissions of harmful substances, so-called VOCs (volatile organic compounds). In a Propyls solvent system, the pigments of the printing ink can distribute more evenly on the film during application due to the slightly slower drying process. This results in a higher ink density for the same amount of pigment. In this way, the same print quality can be achieved with significantly less pigment, which saves expensive stock ink. In addition, improved emptying and pick-up characteristics of both the engraving cylinder and the anilox ensure optimum transfer of the printing ink onto the film.

Pictures: www.oxea-chemicals.com/propyls-cdn

About Oxea

Oxea is a global manufacturer of oxo intermediates and oxo derivatives, such as alcohols, polyols, carboxylic acids, specialty esters, and amines. These products are used for the production of high-quality coatings, lubricants, cosmetics and pharmaceutical products, flavorings and fragrances, printing inks and plastics. Oxea employs more than 1,400 people worldwide. Oxea is part of the Oman Oil Company S.A.O.C. (OOC), a commercial company wholly owned by the Government of Oman. Established in 1996, it pursues investment opportunities in the wider energy sector both inside and outside Oman. OOC plays an important role in the Sultanate's efforts to diversify the economy and to promote domestic and foreign investments. For more information about Oxea, visit www.oxea-chemicals.com

Contact:

OXEA GmbH, Rheinpromenade 4a, 40789 Monheim am Rhein, Germany
Dr. Jens Klabunde, Business Development Manager
Phone: +49 (0)2173 9993-3181

Media contact

Thorsten Ostermann, Communications and Press Relations
Phone: +49 (0)2173 9993-3009, communications@oxea-chemicals.com