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CONTENT:

Editor's Note

Sustaining Future by Advanced Training

— Prof. Long Lin

Few would argue that the sustainable future of the inks and coatings and related industries, like all other industries, relies, amongst other things, on continuing innovations. Although we may not agree upon whether such innovations should come from within a company or from higher education or research institutes through commissioned research, we should have little difficulty in agreeing that innovations require well-trained employees. However, it seems to me that lack of suitable training has, to date, remained the Achilles' heel of the inks and coatings and related industries.

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Resins

Twisting Resin Properties

— Pär Jörgensen, Perstorp AB, Sweden

Polyurethane technologies are for many years known to offer many technical advantages over competing coating systems. Especially, two component polyurethane (2K PUR) coating is seeing a widespread use in application areas such as the automotive sector, wind mills, aircraft, transportation etc. Even though it is such a well-established technology, there is a constant pressure to improve and fine-tune technical properties such as abrasion resistance, scratch resistance and outdoor durability.

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Organic Coatings

Waterborne Long Alkyl Chain Branched Copolymers Used as Release Coatings Synthesised by Mini-Emulsion Polymerisation

— Aili Wang, Weiping Tu, Jun Chen, Jianqing Hu, Feng Wang, School of Chemistry and Chemical Engineering, South China University of Technology, Guangzhou, P.R. China

Waterborne long alkyl chain branched copolymers with excellent release performance for pressure-sensitive adhesive were synthesised via mini-emulsion polymerisation. Dynamic light scattering, video-based contact angle measurement and electronic stripping testing were employed to characterize and analyse the structure and release properties of the resultant copolymers. The results showed that ultrasonic amplitude of 50% and ultrasonic duration of 15 min were the optimum conditions for the preparation of a mini-emulsion containing long alkyl chain monomer stearyl methacrylate (SMA). ([Click to Read the E-magazine](#))

Technology Forecast

The Road Ahead for 3-D Printers (Part 2)

— Alan Earls and Vinod Baya, PwC, USA

In the last issue, we came to a conclusion that it is fair to expect that printer improvements will accelerate in the next few years, although the degree and nature of the chances will vary considerably across printing technologies and vendors. ([Click to Read the E-magazine](#))

Wood Coatings

Isocyanate-Free Polyurethane Coatings for Wood – Fundamental Chemistry & Performance Attributes

— Jason Xu, Rebecca Ortiz, John Argyropoulos, David Pierce, Paul Popa, The Dow Chemical

Two component polyurethanes are used in a variety of industrial coating applications due to their excellent weatherability, toughness, and chemical resistance. When formulated as ambient cured systems, traditional two component polyurethanes typically must balance cure speed and pot life. This paper describes the chemistry and performance attributes of a novel ambient cure, two component isocyanate-free polyurethane coating technology based on the reaction of polycarbamates with polyaldehydes. ([Click to Read the E-magazine](#))

Regular Columns

Industry News

- Cathay reorganizes its iron oxide pigments distribution for coatings
- Huawei launches P9 smartphone with P2i nano coating
- Perstorp enables customers to commercialise innovative polyurethane solutions faster
- AkzoNobel opens its largest technology centre in China

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