



## CURRENT ISSUE

July 2017

## PUBLICATION DATE

July 15, 2017

## Content

### Editor's Note

#### Strategy for Long-term Sustainability – Part II

— Prof. Long Lin

Readers may remember that the editorial of the May issue eluded to the threat to the long-term sustainability of any petroleum chemical dependent industry, and of particular concern, coatings and coatings-related industries, when there is no longer raw chemical materials available as a consequence of the depletion of fossil oil reserve (as well as natural gas reserve of course for that matter).

### Waterborne Technology

#### New Waterborne Siloxane-based Coating to Achieve Thermal Insulation

— David Pierre, Coating TS&D, Dow Corning Europe, Belgium; Jenafer Jensen, Coatings TS&D, Dow Corning Corporation, USA

The use of silicon-based materials in industrial markets has evolved and continues to evolve from niche utility to premium technology for high-performance coatings. Silicone materials can offer improved resistance to temperature, moisture, corrosion, electrical discharge, and weathering when compared to organic-based coatings. Considering common trends in the coatings world today such as lower VOC, lower HAPs (in US), and lower energy consumption, waterbased technology is a viable solution for industrial coatings.

#### Organic Water Soluble Silicates for the Manufacture of Protective Coatings

— Pavel G. Kudryavtsev, Polymate Ltd. - Israel Research Center, Israel; Oleg L. Figovsky, Nanotech Industries Inc., USA

This paper describes the properties of soluble, organic silicates and their applications to obtain nanocomposite materials. We analysed the properties of water-soluble high-modulus silicate systems and technology for their production. The aim of this paper is to compare the properties of binders based on liquid glass containing silicates of strong organic bases.

### Insider View

#### Commitment to the Industry for 26 Years

In 2010, we conducted an interview with Chen Chongguang, Director of Daiquan Fine Chemicals Co., Ltd. and we were impressed by Chen who has stressed the importance of "Working from the Heart" - hope that every people is devoted to his/her work, not to make money illegally but to offer high-tech products/technology so as to lead the industry. Daiquan Chemical, founded in 1991, is a comprehensive enterprise which integrates trading, research and service. In recent years, with the regulatory approach to controlling VOC emissions, Daiquan provides an increasing range of environmentally friendly and suitable waterborne additives for the market.

### Analysis & Testing

#### Uncertainty in Assessment of Appearance Stability of Exterior Wood Coatings

— Nico Frankhuizen, TQC BV, the Netherlands

In recent years, gloss has become an important parameter for quality control. With this increase in dependency on proper measurement, the importance of calibration increased. It can be considered debatable if all specifications on gloss are realistic looking at present technologies. One of the key parameters for a proper implementation of gloss is a suitable calibration regime. At the moment, there are different calibration regimes available. The calibrations are determined by the standard that is in use. Harmonising the standards and with it creating new primary references for calibration is an ultimate goal.

### New Materials

#### New Coating Resins via SASC Polymerisation (Part 1)

— Hui Yu, New Functional Polymers LLC, USA

Self-Addition Self-Catalytic (SASC) polymerisation reaction of norbornenyl acid derivatives is a useful method for ester bonds construction. In this SASC polymerisation, the carboxyl group acts as both catalyst and nucleophile. The novel norbornanyl polyester resin (NBR) with bridged bicyclic skeleton prepared by SASC polymerisation have some special characteristics for coating applications and the low cost dicyclopentadiene (DCPD) and bio-based acrylic acid can be useful raw materials in the production of novel bicyclic coating resins.

### Regular Columns

#### Product Literature

- BYK-1781 silicone defoamer for aqueous systems to eliminate micro-foam generated during application
- Evonik's structurally modified, hydrophilic silica improves the anti-fouling properties of coatings based on cuprous oxide
- New Clariant HOSTATINT™ UV range for easy & safe colouration of radiation cured coating systems
- Schlenk's AluStar® 10600 UTM ultra-treated metallic

#### Industry News

- Clariant and Huntsman to combine in merger of equals
- Wanhua Chemical's North America technical centre puts into operation
- LANXESS Qingdao and Liyang open days: intelligence invigorates innovation, quality works for life
- Wacker's new technical centre for construction and adhesives applications in Indonesia
- Avant-garde colour solutions by PPG add glamour to Chevrolet all-purpose sports concept car
- Better Life, Better Future: Arkema Launches "ChemArt Innovation Inquiry Program" to stimulate students' innovation capability

#### Trade Shows & Forums

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