

Press Release

BYK at the ECS: innovative and environmentally-friendly

Wesel - March 10, 2011: BYK to present innovative and environmentally-friendly solutions for the coatings, printing ink, and adhesives industries from its location in **Hall 7 A, Booth 205** at this year's European Coatings Show (ECS) taking place from March 29th - 31st. This year, the company headquartered in Wesel, Germany, is highlighting the brand new BYKJET[®] - product portfolio for inkjet applications at their booth.

The BYK booth will provide customers and those from the adhesives and sealants industry with a comprehensive overview of the innovations and further developments for these markets.

Environmentally-friendly additive developments for the coatings industry

BYK has been advancing the development of its additive program for eco-friendly formulations for two years. The "green" defoamer BYK[®]-1740 is the newest addition to the Greenability product portfolio. This eco-friendly defoamer is comprised entirely of renewable raw materials and is completely VOC-free. Specifically developed for the formulation of cutting-edge "green" coating systems in the architectural coatings sector, BYK[®]-1740 satisfies all applicable VOC standards around the world.

New wetting and dispersing solutions

BYK's expertise in wetting and dispersing additives consistently leads to the development of innovative solutions in this area:

The high-performance wetting and dispersing additive DISPERBYK[®]-2012 is particularly suited for resin-containing pigment grinds based on water-reducible resins and dispersions. It provides optimum stabilization for a wide variety of organic pigments and carbon black. The additive is utilized in automotive coatings, industrial coatings, printing inks, and architectural coatings.

ANTI-TERRA[®]-250, which is utilized in water-reducible primers, architectural coatings and also coatings for flooring, stabilizes organic pigments. This leads to excellent color acceptance and low ΔE values in the coating system. The mechanism of controlled pigment flocculation also prevents heavier pigments and fillers from settling and sagging in aqueous systems. ANTI-TERRA[®]-250 improves flow properties in epoxy resin-based, aqueous, self-leveling coatings for flooring. The additive is high in solids and is solvent-free.

DISPERBYK[®]-199 is a polymeric wetting and dispersing additive for modified acrylate-based, aqueous systems. It stabilizes inorganic and organic pigments through its anchor groups and its electrosteric effect. The wetting and dispersing additive utilizes the same stabilization mechanism in pigment concentrates and the respective base coats, which results in perfect stabilization and color acceptance. It is APEO- and amine-free and does not create volatile organic compounds (VOCs) in coatings and pigment concentrates. As a wetting and dispersing additive, it can be used in various aqueous coatings (architectural, automotive, and corrosion protection coatings) and preferably is added directly to water for resin-free grinds (slurry) or in connection with grinding resin.

By developing DISPERBYK[®]-2155, BYK was able to combine opposing properties and thus develop a high-molecular polymer that has a 100% solids content but that is completely free-flowing. With its unique spherical structure, it opens up new

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Contact person Market Communication

Frank Dederichs Market Communication Director Tel +49 281 670 217 Fax +49 281 670 660

Verena Skelnik Market Communication Tel +49 281 670 741 Fax +49 281 670 660

BYK-Chemie GmbH

Abelstrasse 45 46483 Wesel, Germany Germany Tel +49 281 670-0 Fax +49 281 65735 info@byk.com www.byk.com



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avenues as a wetting and dispersing additive for high-solid systems. It provides excellent pigment deflocculation and is also solvent-free and liquid.

A new additive for the DISPERBYK-190 product line

For years, DISPERBYK[®]-190, has been the standard additive for pigment wetting in printing inks. For some organic pigments and carbon blacks that are particularly difficult to wet, BYK is now introducing the ideal alternative to DISPERBYK[®]-190: DISPERBYK[®]-198. The new additive, which is recommended for aqueous pigment concentrates and printing inks, is effective for many organic pigments and carbon blacks and provides a high gloss level and exceptional transparency and color strength.

Creative and innovative chemistry

The macromer technology taps into unique product profiles with properties that can only be achieved through innovative chemistry. The new additive BYK[®]-3550 is a silicone macromer-modified polyacrylate that combines both acrylate and silicone properties in one unique additive. The additive significantly reduces the surface tension in the coating system, therefore improving substrate wetting and preventing craters from forming.

BYK[®]-3550 exhibits different properties depending on the polarity of the system. In coatings with high polarity, the silicon provides good anti-crater properties without increasing the surface slip. The acrylate chain generates an excellent flow. In non-polar systems, conventional silicon additives often have a negative impact on recoatability. As a result of its long acrylate chain, BYK[®]-3550 provides outstanding recoatability in such systems and an excellent flow in connection with distinctive anti-blocking properties.

New product portfolio for the inkjet ink industry

The new BYKJET[®]- product portfolio includes additives for solvent-based as well as aqueous and radiation-curable inkjet ink systems. The wetting and dispersing additives are characterized by excellent pigment deflocculation and stabilization. The result in terms of color strength, gloss, haze and transparency speaks for itself.

The new BYKJET[®] additives considerably reduce the viscosity of pigment concentrates and also give inkjet inks a longer storage life! Small particle sizes coupled with a narrow particle size distribution guarantee that the inks formulated with BYKJET[®] additives have excellent filterability.

Adhesives and Sealants

In many industrial sectors such as the automotive and the electrical industry, gluing has become a key technology replacing conventional procedures. The more specific the application, the greater the requirements are for the adhesive formulations and thus, also for the additives used. In addition to defoamers or surface additives, BYK also offers wetting and dispersing additives as well as liquid rheology and leveling additives for aqueous, solvent-free and solvent-based adhesive formulations.

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Scientific lectures and product presentations at the European Coatings Congress and in the trade show halls

- European Coatings Congress, March 29, 2011, Session 9: Smart Coatings Conductive coatings using carbon nanotubes, Dr. Michael Berkei
- Product presentation, March 29, 2011, 2:50pm 3:10pm, Hall 10 DISPERBYK®-2012: High-performance wetting & dispersing additive for water-borne, resin-containing and slurry grinds, Mark Heekeren
- Product presentation, March 29, 2011, 1:30pm -1:50pm, Hall 7 Additives for greener coatings, Wilhelm Wessels
- Product presentation, March 30, 2011, 10:30am 10:50am, Hall 6 Improved application security for solvent-based baking automotive and GI clear coat systems, Axel Woocker
- Product presentation, March 30, 2011, 3:30pm 3:50pm, Hall 6 BYK®-3550: Patented new technology of a surface-active additive based on a silicone macromer-modified polyacrylate, Mark Heekeren
- Product presentation, March 30, 2011, 11:30am 11:50am, Hall 7 Innovative wetting and dispersing additives for inkjet inks, Dr. Stefan Mössmer
- Product presentation, March 31, 2011, 1:30pm -1:50pm, Hall 10 BYK®-3933 P: Patented new technology for new interactions in powder coatings, Thomas Czeczatka
- Product presentation, March 31, 2011, 3:10pm 3:30pm, Hall 6 Additives for reactive adhesives and sealants, Jan Lenz

About BYK Additives & Instruments:

BYK Additives & Instruments is one of the leading suppliers in the additives and measuring instruments sector. Approx. 87% of its sales are generated outside Germany. Its major foreign markets include neighboring European countries, the USA and the Far East.

Additives are chemical substances that, even when added in small amounts, improve product properties such as scratch resistance or surface gloss. Manufacturing processes are also optimized with the use of additives. BYK additives are primarily utilized in the coating, printing inks and plastics industries. However, BYK additives also improve product properties and manufacturing processes in paper surface finishing or the manufacturing of adhesives and sealants as well as in the chemical engineering within the construction industry. In 2009, BYK broadened its portfolio to include raw materials for the manufacturing of separating agents for aluminum pressure die casting.

BYK testing and measuring instruments can effectively gauge the quality of color, gloss and appearance as well as the physical properties of coatings, plastics and paper products and are an integral component of quality control.

BYK Additives & Instruments is a member of ALTANA AG, Wesel. ALTANA develops and produces high-quality innovative products in the specialty chemicals business.

BYK Additives & Instruments currently employs 1,200 people around the world, with approximately 25% of them working in research and development.

This press release is also available at www.byk.com/pressemitteilungen

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