

Cabot Corporation Launches New Fumed Silica and Carbon Black Products for Toner Applications

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New Products Include Carbon Black for Polyester Toners and Fumed Silica that Enables Greater Durability

BOSTON--(BUSINESS WIRE)--Sep. 4, 2014-- <u>Cabot Corporation</u> (NYSE: CBT) has developed three new products for use as additives in electrophotographic toner applications. Cabot's new REGAL® T-30R and REGAL® T-40R carbon black pigments are specifically designed to deliver improved tribocharge and excellent image density performance for polyester toners. Cabot's new CAB-O-SIL® TG-3155F fumed silica additive enables improved toner durability, and provides superior humidity resistance, tribocharge and free flow.

Carbon Black Products for Improved Tribocharge Control and Print Quality

Newer toner formulations are increasingly using polyester resins that enable lower fusing temperatures and more transparency for color toner. Polyester resins also support higher printing speeds, are less demanding on hardware and have lower energy consumption. However, many of the carbon black pigments that work well in other resin systems do not deliver the required tribocharging performance and resistance to humidity when used with polyester.

To meet the demanding requirements of polyester toner, Cabot has added REGAL T-30R and REGAL T-40R carbon blacks to its product portfolio. The morphology of these materials is specifically designed to minimize dissipation of electrostatic charge in a resin system, resulting in improved toner tribocharge and print quality. The surface characteristics of the REGAL T-30R and REGAL T-40R products also renders them less sensitive to humidity than oxidized carbon blacks commonly used in toner applications, enabling more consistent printing in a variety of environmental conditions.

CAB-O-SIL Fumed Silica Product for Improved Print Consistency Over Long Runs

The trend toward toners with a lower fusing temperature has also created a need for external silica additives that exhibit greater durability over long print runs. Silica additives are typically mixed with toner particles to enhance flow properties and to enable the tribocharging that is integral to the laser printing process. Traditionally, silica additives with small particle sizes have been used to maximize the tribocharging effect, but with newer toners these silicas tend to lose their effectiveness when they become deeply embedded into the surface of soft toner particles during mixing. The result is declining print quality over long runs.

Cabot's unique surface treatment used in CAB-O-SIL TG-3155F provides numerous performance benefits. Compared to smaller silica additives with the same treatment, the new CAB-O-SIL TG-3155F fumed silica additive enables the toner to have greater durability over long print runs due to its larger particle size. CAB-O-SIL TG-3155F is dual-treated with both hexamethyldisilazane (HMDZ) and polydimethylsiloxane (PDMS), enabling an outstanding balance of humidity resistance, tribocharge and transfer efficiency. This means better print quality with less waste and more consistency than when using comparable additives with a single treatment.

"As the needs of the toner industry evolve and electrophotography further penetrates the commercial printing market, we continue to expand our product portfolio to meet and often exceed our customers' product performance requirements," said Hajime Kambara, Global Applications Development Lead at Cabot. "Our toner customers can rely on us to deliver high performance materials that provide them with a critical edge for toner-based printing."

Cabot will showcase these new products at the upcoming <u>International Conference on Digital Printing Technologies (NIP)</u>, held September 7-11, 2014 in Philadelphia. Pennsylvania.

ABOUT CABOT CORPORATION

Cabot Corporation (NYSE: CBT) is a global specialty chemicals and performance materials company, headquartered in Boston, Massachusetts. The company is a leading provider of <u>rubber</u> and <u>specialty carbons</u>, <u>activated carbon</u>, <u>inkiet colorants</u>, <u>cesium formate drilling fluids</u>, <u>fumed silica</u>, <u>aerogel</u>, and <u>elastomer composites</u>. For more information on Cabot, please visit the company's website at: http://www.cabotcorp.com.

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Source: Cabot Corporation

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