

New Functional Dry Toners For Digital Printing Applications, Using The Flexdesign-Concept

*S. M. F. Tavernier, D. Heitzmann, A. Verhecken, P. Marksch,
S. De Meutter and G. Desie
Agfa Gevaert NV (Belgium)*

Abstract

Electrophotography has proven itself to be a capable technology in the field of High Quality On Demand Colour Printing with offset quality as a reference. Further progress is being made in the design of dual component toner/developers in terms of flexibility in design and performance. The new FlexDesign concept is based on a tuned carriercoating/toner design and enables the creation of a new family of toners/developers aimed at applications where apart from process performance and image quality, new functionalities are implemented in the consumables. Apart from the design, new areas within the scope of dry toner based digital printing will be discussed related to the DCP/Chromapress systems. New possible applications are : security, textile, ceramics/enamels, base-layers, top-coats, Corresponding toner materials having markedly different functionalities are proven to be similar in electrophotographic performance.

Dry toner technology has an intrinsic strength related in the flexibility of incorporating and stabilizing the new

functional components. Since FlexDesign enables to reduce largely the disturbing effects of incorporating functional materials in the tonerparticles, it enhances this strength of dry toner concept, when compared to other digital printing consumables such as liquid toners and Ink-Jet inks. New design methods in dry toner technology, especially dual component based, will hence promote dry toners as a highly valued technology for future digital printing applications.

Biography

S. M. F. Tavenier graduated from the University of Antwerp in the field of chemistry (1977). He was research fellow at the NFWO from 1997-1981 and received his Ph.D. in 1981 from the University of Antwerp in the field of physical chemistry. He joined Agfa-Gevaert in 1981 starting in liquid toning systems, and is at this moment manager of the Electrophotographic Developing Materials group of this company.