

Ink Jet Inks for Digital Printing

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Ink jet printing seems to be one of the most promising technologies of all the digital printing technologies available today. Its success depends on developing high speed and high resolution printers and specifically designed inks for the targeted substrates. The development in Impulse Ink Jet technology eliminates some of the constraints on the type of ink that could be used relative to other technologies (thermal or bubble jet).

Till recently, dyes were used as colorants in ink jet inks but the demand for pigment and solid ink has been growing steadily. Likewise, the demand is growing for water based inks compared to solvent based inks due to environmental constraints, especially in applications such as textile printing. With wide format signages, textiles, and all kinds of graphics trying to go digital, there is a greater need to develop new inks to meet the applications demands.

The technological challenges in developing ink jet inks include the performance of the ink under different environments such as dust, air draft, temperature fluctuations and high humidity as well as compatibility with the printhead for longer usage life. Also, there are strict

regulations on shipping, transporting and work place safety for these inks to gain market acceptance. This presentation briefly addresses the state of the art and the technological challenges for the successful development of ink jet inks for digital printing.

Biography

Sarma Deverakonda. Ink Development Manager, Trident International, Inc. (May, 1997 - Present).

Prior to current position, held various scientific and research position at University of Texas at Austin and Georgia Institute of Technology. Areas of Interest include Textile Printing using Ink Jet and Electrophotography, Colloidal and Surface Science, Polymer Science and Rheology and Flow Through Porous Media.

Education: Ph.D in Chemical Engineering, Indian Institute of Technology, Bombay, India, 1990. B. Tech in Chemical Engineering, Andhra University, Waltair, India, 1984.