

Kao Corporation

Kao Agrees to Acquire US Inkjet Ink Company

June 20, 2016

On June 1, 2016, Kao Corporation (President and CEO: Michitaka Sawada) concluded an agreement to acquire Collins Inkjet Corporation (Headquarters: Ohio, U.S.) through a Kao Group company in the U.S.

Kao has been developing water-based pigment dispersions (pigment dispersing liquids) and ink to propose a new value in the inkjet ink market for industrial printing.

By further applying “pigment nano dispersion technology”^{*1} cultivated by Kao for years, in March this year Kao succeeded in developing the world’s first water-based pigment inkjet ink^{*2} for printing on film materials used in flexible packaging.^{*3} With a VOC-free design^{*4}, the newly-developed ink allows for the supply of high-quality, environmental impact-reduced^{*5} printed materials.

Collins Inkjet Corporation, based in Cincinnati, Ohio, U.S. is engaged in development, manufacturing and sales of inkjet ink and related equipment. The company was an early entrant into the rapidly growing inkjet ink market for industrial printing. With its advanced ink designing technologies responding to a wide variety of inkjet heads and its reliability, the company has built a wide customer network. Collins Inkjet continues to focus on ink development to broaden the application range and expand the business globally.

By taking advantage of newly acquired technologies, manufacturing systems and sales networks from Collins Inkjet in addition to its own technologies, Kao will provide global customers with its innovative products and services that can contribute to the mitigation of environmental impact.

Outline of Collins Inkjet Corporation

- Company name: Collins Inkjet Corporation
- Established: 1990
- Location: Ohio, U.S.
- Business activities: Developing, manufacturing and selling of inkjet ink
- Employees: Approximately 90

The acquisition will be completed in July 2016.

*1 Pigment nano dispersion technology

The technology for the nano-sized pigment dispersion coated with Kao’s originally designed functional polymer. By applying this technology, Kao developed water-based pigment dispersions for inkjet ink (pigment dispersing liquid) and started production and sales of inkjet pigment dispersions and ink that ensure high-speed and high-quality printing. Kao is promoting its ink

business extensively specifically in the field of office and commercial printing market.

***2 About the world's first water-based pigment inkjet ink**

- Pigment ink: Water-based pigment inkjet ink that reduces environmental impact with a VOC (volatile organic compounds)-free design (for line head printer)
- Survey of literature regarding the world's first

Searched and confirmed using SciFinder (technology-related literature database) and brochures supplied by major device manufacturers that market in North America, EU, China and South Korea. Search conditions: "ink" x "inkjet" x "film" (except for patent). No relevant literature was found in relation to "environmental impact-reducing, water-based pigment inkjet ink with a VOC-free design (without using volatile organic solvent)." (*Kao has already applied for a patent.) (Kao survey as of February 20, 2016)

About SciFinder

The world's largest information search tool compiling literature and information on substances in the biomedical- and material science-related fields to enable comprehensive retrieval of literature, substances and reaction information. Useful to assess novelty of research and development.

***3 Flexible packaging**

Packaging made up of such highly elastic base materials as plastic film and paper.

***4 VOC-free design**

The volume of VOC (volatile organic compounds) emission, in carbon equivalent, less than 700ppmC in the printing process is defined as a VOC-free design.

The Revised Air Pollution Control Act (enacted in 2006) regulates VOC emissions in Japan.

***5 Environmental impact-reduction**

This means to mitigate the volume of VOC emitted in the printing process.

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