

Nazdar UV Inkjet Innovation: New Products and New Technologies

Nazdar Ink Technologies has gained a loyal following of not only end users, but also printer manufacturers that rely on the Nazdar development team to not only manufacture inks of the highest quality and consistency, but to also develop new products. 2015 and 2016 have seen the launch of several new and exciting products from Nazdar, further extending their already extensive range of inkjet inks.

LED CURING INKS

In the last decade, the use of LED (Light Emitting Diode) curing for energy curable inks and coatings has been gaining inroads into the graphic display, label, packaging, industrial, container, and other commercial printing sectors. In the last two years, the industry has seen a significant increase in the number of commercially available wide and grand format inkjet printers equipped with some form of LED/UV curing systems;

as well as narrow web inkjet presses with LED/UV pin and final curing. Nazdar has developed several new inks for use with LED-curing technology in wide/grand format UV inkjet printers.

LED lamps have proven to have tremendous benefits over the mercury-arc lamps that have traditionally been used for UV curing. Several inkjet printer manufacturers are claiming power reductions of their UV curing systems in the 65-75% range. Studies done by Nazdar





PLUG-AND-PLAY UV INKJET INKS

In late 2015, Nazdar launched their first entry into the plug-and-play UV inkjet market with the introduction of their 702 Series UV inks for the Canon/Océ Arizona printers, and their 703 Series inks for the Fuji Acuity printers. These inks were designed to be installed seamlessly with the OEM inks for a trouble-free conversion. "I had already been in contact with Chris Bailey from Nazdar inks distributor QPS about compatible inks for the Océ Arizona 250 GT, so he emailed me as soon as they were ready," explains UK-based Marshall Signs Owner Andy Marshall. "Conversion was very simple and the inks are very consistent. The health and safety signs that make up the bulk of our work require block colours and Nazdar 702 inks provide vibrancy and a nice matte finish with none of the striping we experienced with other inks. We're very pleased with them."

At Fespa Digital 2016, Nazdar announced their European launch of their new 705 Series inks for the HP FB500/700/950 platform. These inks were subsequently launched in the US at the International Sign Expo in April. Like the 702/703 inks, the 705 inks are designed to be a colour match to the OEM inks, but with an added benefit of improved adhesion to a wider range of substrates.

Nazdar's three-tiered approach to explaining the colour matching properties of their plug-and-play inks takes into account the extremely wide range of substrates used in the UV flatbed and hybrid printer market, as well varying levels of colour critical tolerance from one print facility to another. "While we always strive to be an exact match to the OEM ink set, we also look at regulatory and environmental factors when developing our inks," says Rich Dunklee, Global UV Inkjet Market Segment Manager for Nazdar. "We strive to incorporate the latest advancements in UV inkjet ink chemistry into all of our products. Sometimes, this means adjusting a colour very slightly to make our ink set more environmentally friendly than the competitive ink that we are replacing."

Nazdar's colour match statement states that Nazdar inks have been designed to be

as close a colour match as possible to the OEM inks while still adhering to the most recent regulatory standards and giving better overall adhesion performance. The ink sets are considered "plug-and-play" in the sense that they can be installed directly behind the OEM inks without the need to flush. Nazdar publishes the following three scenarios to determine which installation method is best for a particular end user:

- **Plug & Play** - Inks can be replaced one colour at a time as the OEM inks become empty. This method is best for print facilities that print pleasing colour and do not have a great deal of repeat jobs. Depending on the sequence in which the colours are replaced, a user may see slight shifts in some colours until all the Nazdar inks are installed; at which time the prints will be a very close match to the original inks.
- **Plug & Prime** - All the colours can be replaced at the same time. If the work a company produces has no tolerance for slight shifts as the new ink is installed, it is best to install all of the colours at once and prime the printer with a bit of ink. The final set will be a very close match to the OEM ink set.
- **Plug & Profile** - All the colours are replaced with a re-profiling of the printer. If a print facility has multiple devices that are all profiled to match a specific target (a proof for example), it is best to install all the colours, prime the printer, and re-profile to your specific target.

Nazdar Ink Technologies was founded in 1922. Nazdar's headquarters are in Shawnee, Kansas, USA with a manufacturing and distribution facility for inkjet inks located in Stockport, UK; and additional locations in Singapore and Shanghai, China. For further information on Nazdar UV Inkjet products, please visit www.nazdar.com/en-us/DIGITAL-INKS-Inks-By-Chemistry-UV-Curable-Inks, or call +44 161 442 2111.

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on LED/UV curing system in the screen print industry support the assertions made by inkjet printer manufacturers.

Because LEDs are solid-state devices that use semiconducting technology to produce their output, they do not share some of the drawbacks of traditional mercury lamps. LEDs have a much longer lifespan than a traditional bulb: 20,000 hours for a LED vs. 800-1000 hours for a mercury-arc bulb. While a mercury bulb will show a marked decrease in output intensity over its lifespan, an LED will provide the same level of power through its entire life. LED technology also allows for the lamps to be switched on and off as needed with no warm-up or cool-down periods required, further enhancing their energy saving properties. Much of the efficiency in LED lamps is due to the fact that 100% of the energy emitted is used for curing. LEDs are monochromatic, which means that all of their energy is emitted in a very narrow spectral band; typically 395 nanometers. The industry also sees LED systems emitting energy in the 365nm or 405nm range. With mercury-arc lamps, a great deal of the energy emitted is lost to the visible spectrum or to heat, neither of which aid in the curing of the deposited material.