

Dear Friend,

I get several requests for information per day regarding image quality of Ferrania's inkjet print media products. In terms of color brilliance and image detail, a set of print samples clearly demonstrates the excellent image quality of PhotoJet print media products. Explaining our quality in terms of image longevity or resistance to fade is more complicated because we support our print media products in all inkjet printers. The following is my collective comments in response to Ferrania's inkjet media products' ability to resist image fade or enhance image longevity.

Image permanence or resistance to fade has become an issue in the development and acceptance of inkjet imaging as an acceptable replacement to traditional silver halide photographs. Both value-added resellers and original equipment manufacturers offer specific inkjet imaging systems to offer enhanced image fade resistance. Specific inkjet systems offering enhanced image longevity support their claims by specifying the printer, inks, print media and display conditions.

The important point to remember is that the image longevity claim is based upon the user's compliance with all parts of the specific inkjet system, a closed-system platform, and meeting defined display conditions. Also worth mentioning, companies offering enhanced image life systems are pricing both inkjet equipment and imaging supplies based upon the extra value offered by longer image life. Finally, the remedies offered if printed images fail to reach stated longevity are varied by the seller, untested in terms of recovery and very limited scope. As always, the buyer must beware and determine what is exactly behind any marketing claim and that any additional cost or quality compromise is justified in a particular digital imaging situation.

Epson's Stylus 2000 is a great example of a desktop printer offered by an OEM that features great image longevity. Like nearly all specific inkjet systems offering superior image longevity, the Epson 2000 inkjet system abandoned dye-based inks and uses a pigmented ink set. Here is the key question to ask, if pigmented inks are the simple answer to image fade resistance, then why doesn't all inkjet systems use pigmented inks?

At the very least, pigmented inks cost more than dye-based inks. However, pigmented ink's higher cost is not the main reason why pigmented inks have not come to dominate the inkjet market place. What has kept pigmented inks from replacing dye-based inks? Two critical attributes of pigmented inks are their different and smaller color space. In general, dye-based ink's larger color space makes it possible to hit many more colors and tones than pigmented inks. Whether photographs or art is being printed, color brilliance is a critical image quality requirement where compromise is rarely accepted.

Another negative attribute of pigmented inks is their longer print drying time over dye-based inks. The longer the drying time, the longer the opportunity that the print will be smudged before it is dry. To compensate, the printing speed is decreased to compensate and allow more time for drying. A fair comparison is the Epson 1270 dye-based inkjet print system and the Epson Stylus 2000 pigmented-based inkjet print system. Both printers have very similar capability, yet the print time on the Epson Stylus 2000 in its best quality mode is nearly double that of the 1270's best quality print mode. That works out to about ten minutes more print time per 8" x 10" image on the Stylus 2000. Epson also recommends that the Stylus 2000's prints are allowed to dry for a twenty-four hours before handling or additional finishing. While the Stylus 1270's prints are dry to the touch almost immediately. Total production time needs to be considered as part of the total inkjet image production costs. Based upon total production time, pigmented inks increase the total inkjet imaging cost.

As stated, the benefit of superior image longevity needs to be offset set by less color image quality and higher production costs. If we look to the market place, currently far more dye-based inkjet printing systems are sold and pigmented ink systems are not dominating the market. Will

the future of the desktop printer market migrate to pigmented inks? If desktop inkjet market follows the same pattern as large format inkjet printing systems, the answer is no for the majority of inkjet printing needs, including consumer digital photography, but probably yes in the specialty art markets.

Ferrania Imaging Technology does not make any specific marketing claim as to the image life of images printed on Imation PhotoJet media and are not currently offering Imation PhotoJet print media as part of a specific inkjet imaging system offering enhanced image longevity. Rather our Imation PhotoJet products are engineered to provide exceptional color brilliance, maintain sharp dot structure, ink optimized results and excellent fade resistance in all inkjet printers.

Imation PhotoJet inkjet print media products utilize our aqueous coating technology to enhance image longevity. Aqueous coatings are non-solvent and do not break down the inkjet imaging inks. Inkjet images printed on PhotoJet Premium Photo Paper are fade resistant. Even compared to “*archival*” photo papers, PhotoJet provides competitive image fade resistance results. In addition, PhotoJet Premium Photo Paper is utilizes the same acid-free resin coated photo paper found in premium conventional photo processing. The acid-free content prevents the paper from yellowing and becoming brittle over time. Using the same photo paper gives digital prints the same weight and feel of traditional photographs.

Lyson is the world’s largest manufacture of inkjet inks and has created inkjet ink products that set the standard for image fade resistance. Their internal image fade testing follows the procedure developed by Henry Wilhelm and adopted by the American National Standards Institute, ANSI. Unlike commercial testing lab situations, Ferrania Imaging Technologies did not compensate Lyson Ink to include Imation PhotoJet print media products in their testing nor were we asked to screen the results before publishing. The results of Lyson’s test are posted on Lyson’s website at [www.lyson.com/technical%20support/mrestable.html](http://www.lyson.com/technical%20support/mrestable.html). Please review all the test results and learn more about Lyson Inks.

Based upon the information posted on Lyson’s website, Ferrania’s Imation brand PhotoJet Premium Photo Paper provided the best resistance to fade versus any of the tested competitive inkjet media products on the Epson 3000 using Lyson’s Fotonic Inks. We are very pleased with the results our inkjet coating technology has demonstrated in an unbiased testing situation. However, we ask everyone to keep in mind, Ferrania Imaging is not currently making or supporting any marketing claim defining the specific image longevity of our PhotoJet products. Our products are engineered to enhance digital imaging performance in all inkjet printers. PhotoJet’s product benefits are not limited to image permanence but also offer excellent image quality and ink optimization technology.

To learn more about our Ferrania Imaging Technologies and Imation branded PhotoJet inkjet print media products, contact Jeff Fowler, Inkjet Business Development Manager at the following address:

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