



Lightfastness – strengthened ink, **Ever PLUS**

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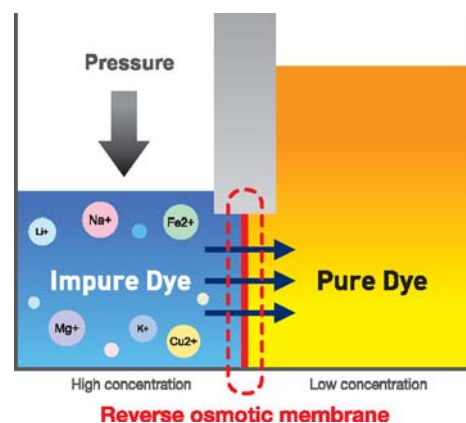


Thorough quality management from choice of ingredients to formulation

It is important to purify dye and ink since insoluble materials in inks can lead to various types of failures in inkjet printing systems, including corrosion, nozzle clogging, decreasing lightfastness and so on. InkTec has been managing thoroughly from choice of ingredients to ink formulation. The dye is a key ingredient for which purity must be carefully managed. So, we don't just buy purified dyes as like our competitors. After countless tests of various raw dye powders, we choose the perfect one and refine the dye powder by our own equipment and technology to improve purity of dye.

InkTec's dye purification system

With reverse osmosis process, the salts oils, polymers and so on are eliminated.

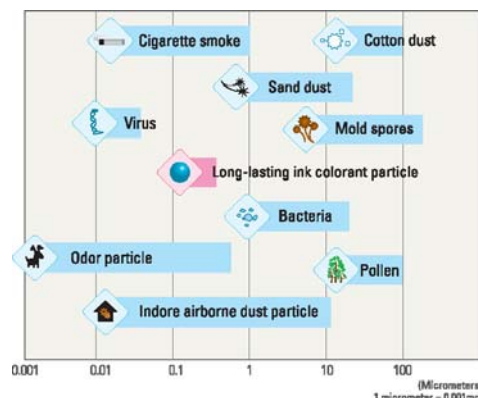


Microfiltration of formulated inks

After ink formulation, our Ever PLUS inks are microfiltered to remove 99.9% of insoluble materials.

Especially, most photo papers for HP are vulnerable to size of dye ingredient. Print head of HP is also designed for small dye ingredient.

To improve photo printing quality, purity & size of ingredients are very important.



That is why InkTec is committed to manage purity of ingredients & formulated inks. Thanks to those strict managements, InkTec's Ever PLUS inks are optimized to print out various photos.



Superior lightfastness, the key point of **Ever PLUS** inks

Ink formulation has been changed according to printing technology which is also being updated rapidly. The major feature of the latest released printers is a reinforced functionality to print photo images. Regardless of pigment or dye based ink, lightfastness is a key point for OEM manufacturers when they develop new products. Reflecting those trends, HP recently released strengthened dye color inks, HP 110, HP 57+, and HP 78+ . But, most ink manufacturers in the after market aren't caring the colorfastness. Except pigment based inks, only printing image and ink flow is important to develop inks for them.

When we developed the Ever PLUS inks, the key point was to improve lightfastness. And we gladly introduce our new products, Ever PLUS inks which have a strong lightfastness close to HP strengthened dye color inks (HP 78+, HP 57+, HP 110).

Optical density- Black

To compare the average value of color inks' lightfastness with HP, we printed black color by mixing cyan, magenta, yellow color. And then we checked a changed value of optical density per 3 month. If the measurements are changed dramatically, it means which inks have weaker lightfastness.

Optical density - Each color

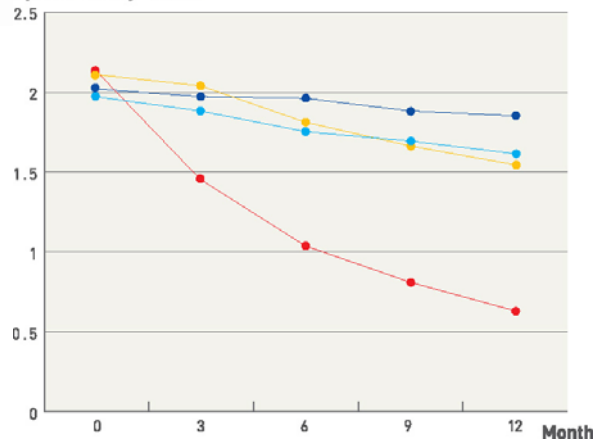
It evaluates the resistance of printed output toward the effects of rain and sunlight. Depending on the rate in light fade, color gamut value changes. When original printing is compared to one year later printing, if both inks show similar measurements, it means they have faded less color by light.



Superior lightfastness,
the key point of Ever PLUS inks

HS0006

Optical Density - Black



- HP 57+ (cb278an)
- Ever PLUS (HS0006)
- A Company
- B Company

Test Method : ASTM D4459

Test Equipment : S3000 (ATLAS Company)

Exposure Conditions

1. Exposure Type - Accelerated weathering
2. Xenon arc lamp - 0.30W/m2@340nm
3. Glass filter

Optical Density - Color

Condition	Color	HP 57+	Ever PLUS (HS0006)	A Company	B Company	HP 57+	Ever PLUS (HS0006)	A Company	B Company
Original Printing	●	1.23	1.2	1.66	1.25				
	●	1.75	1.69	2.05	1.97				
	●	1.82	1.76	2.04	1.94				
One year Later	●	1.03	0.98	0.14	0.95				
	●	1.58	1.04	0.77	0.82				
	●	1.73	1.62	0.43	1.34				

Test Method : ASTM D4459

Test Equipment : S3000 (ATLAS Company)

Exposure Conditions

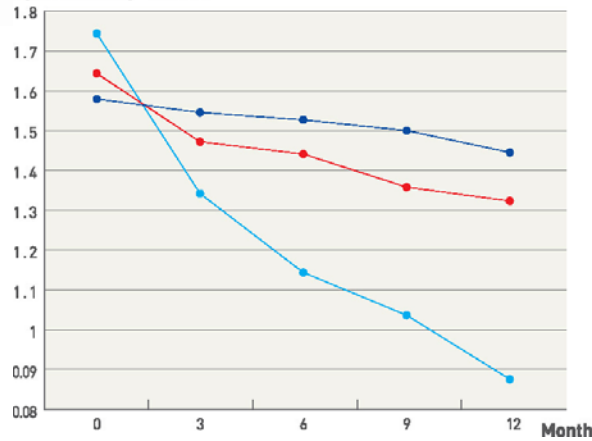
1. Exposure Type - Accelerated weathering
 2. Xenon arc lamp - 0.30W/m2@340nm
 3. Glass filter
 4. 288hr (24hr in the machine = a month in door)
 5. Paper : HP premium plus photo paper
- Depending on test methods on conditions, the result can be changeable.



Superior lightfastness,
the key point of Ever PLUS inks

HS6066

Optical Density - Black



- HP 110 (cb304)
- Ever PLUS (HS6066)
- A Company

Test Method : ASTM D4459

Test Equipment : S3000 (ATLAS Company)

Exposure Conditions

1. Exposure Type - Accelerated weathering
2. Xenon arc lamp - 0.30W/m2@340nm
3. Glass filter

Optical Density - Color

Condition	Color	HP 110	Ever PLUS (HS6066)	A Company	HP 110	Ever PLUS (HS6066)	A Company
Original Printing	●	1.06	1.07	1.30			
	●	1.39	1.40	1.46			
	●	1.82	1.79	1.75			
One year Later	●	0.99	0.96	0.26			
	●	0.93	0.60	0.39			
	●	1.65	1.46	1.44			

Test Method : ASTM D4459

Test Equipment : S3000 (ATLAS Company)

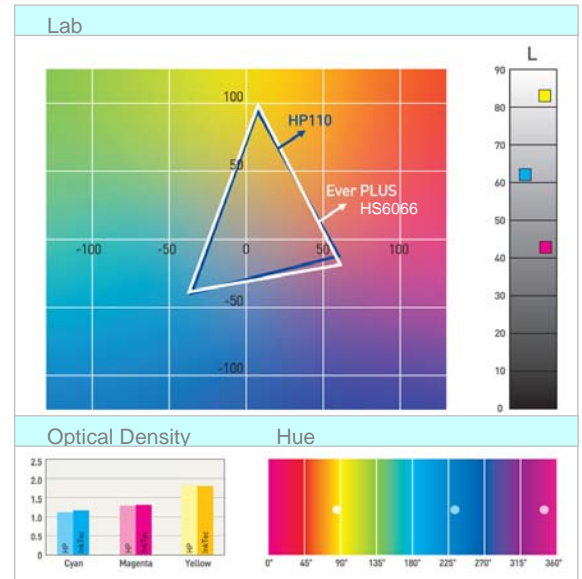
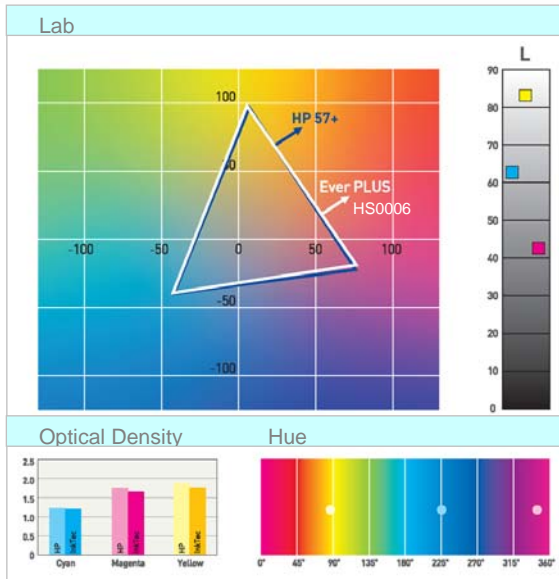
Exposure Conditions

1. Exposure Type - Accelerated weathering
 2. Xenon arc lamp - 0.30W/m2@340nm
 3. Glass filter
 4. 288hr (24hr in the machine = a month in door)
 5. Paper : HP premium plus photo paper
- Depending on test methods on conditions, the result can be changeable.



Same color with HP

When InkTec's color is compared to the counterpart of HP on the HP photo paper, if both inks show similar measurements, it means they have a similar color gamut.



Measuring condition

Spectrolino
(GretagMacbeth company)

Measuring condition

1. Illuminatio - D50
2. Observer angle - 2°
3. Geometry - 45° / 0°
4. Density Standard - DIN
5. White base - Absolute
6. Filter - No



InkTec's unique formulation, Patent Free

Nowadays, patent arguments with OEM are becoming a hot issue in the after-market. InkTec was also entangled in those arguments. But, for a long time, InkTec has already repared patent free inks against possible patent disputes. So, we are now releasing the effectly patent free inks to public. Thanks to InkTec's tech - savvy chemists, now you can enjoy the brilliant printing quality closed to OEM inks without concern about patent dispute. With strong confidence in our patent free inks, we should be able to guarantee any argument about patents of HP.




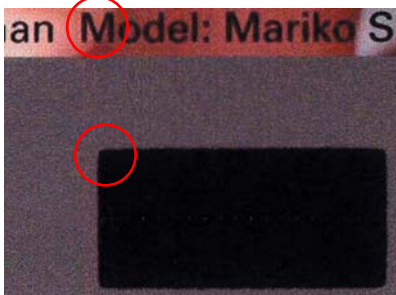
The outstanding combination inks and paper

When developing the inks, OEMs consider compatibility of inks to their own paper. They often come up with new paper along with new ink cartridges. So, optimum inks for HP paper mean which inks are fitted to HP cartridge.

Comparison of print quality on the HP photo paper


Other low quality Inks

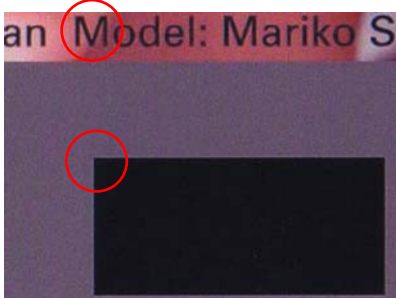




- Unabsorbed inks
(Some inks remained on the surface of paper.)
- Smearred letters.
- Unclear shape of figure

Inktec Ever plus Inks





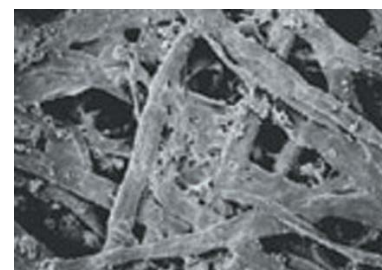
- Perfectly absorbed inks into inkjet receiving layer of paper.
- Sharp letters
- Clear shape of figure

As above, Ever PLUS inks are perfectly matched with HP photo paper.

Test on the various papers

But, the degree of absorption is different even for the same ink since the porous layer on the paper (many small spaces existing between pulps of the paper) differs depending on the coating type and amount. The paper using large amount or special type of coating reduces the contact of the ink with the porous layer and prevents ink spread. Considering these characteristics, InkTec performs the ink spread test on the various papers.

So, if you print on any paper with InkTec's Ever PLUS inks, you should be satisfied with the print quality.



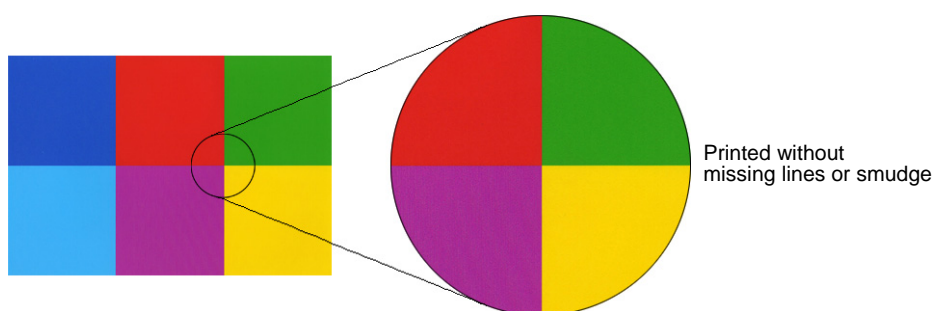
The porous layer on the paper



Stable ink printing quality under various weather conditions

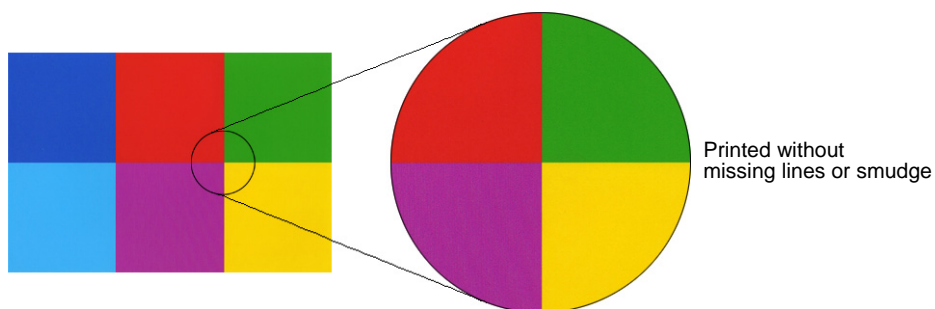
Since InkTec products are exported to more than 120 countries all over the world, the quality is tested under the diverse weather conditions to prevent degradation of the ink during prolong transportation and storage

The result of the freezing test



Test condition : Refilling and printing out after being kept for 5 days at -30°C, and for 2 hours at normal temperature.

The result of the high temperature test



Test condition : Refilling and printing out after being kept for 5 days at 60°C, and for 2 hours at normal temperature.

Optimum condition for ink use is 15°C~35°C(59°F~95°F), and directly light or extreme coldness should be avoid.