Technical white paper

Colors shift unexpectedly Latex 800 Series



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How to avoid Color Inconsistency

In certain colors and applications a certain amount of color shift can be observed especially between the right and left edge of an image. To prevent this use the following options:

To ensure overall Print Quality and Color Consistency, is acceptable check the following:

1. Make sure all calibrations have been performed with good results

Printhead Alignment

Ensures color to color alignment and bidirectional alignment within a color.

Substrate Advance Calibration

Checks and corrects potential color plane misregistrations in the substrate axis.

Color Calibration (CLC)

Ensures linear tonal response as well as consistency between different printheads and printers. A separate Color Calibration is advised for each substrate but also when any given printhead is changed. To get an even better performance we recommend performing the Color Calibration frequently, depending on the printer's usage it can be scheduled weekly, every two weeks or longer according to your work flow.

Dynamic Color Correction

Corrects the color plane misregistration that can be caused by the substrate deforming under heat.

2. Use Bidirectional printmodes

To minimize the tonal differences between the end and beginning of a swath.

3. Use Higher pass printmodes

They cause lower stress to the printhead and thus less related tonal differences.

4. Use of Spitbars at plot sides.

Spitbars are provided within the IPS, they help with startup problems by preparing the printhead for printing a job. It should be noted the Spit bars available within some RIP applications do not include bars of light colors.

The Spit bars have to be added at the side of the plot vertically, parallel with the edge of the substrate, towards the cartridge side (they can also be added on the other side, but this reduces the impact they make). To add Spit Bars use the following procedure:

- a) Select nesting from the IPS PC.
- b) Add the following file situated in the IPS PC in Documents\HP IPS\Spit Bars.
- c) Select the Spit Bar at the same resolution as the job to print, and place the Spit Bar on the right of the image on the IPS (this will then be printed on the left side, towards the cartridge).

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Another method is to add the spit bars within the RIP application, nesting them with the plot to print. The spit bar file to take is available on the IPS PC, under: Documents\HP IPS\Spit Bars, take the file 'spitBars_300_HR_1.TIFF'. Do NOT use the default spit bars from the RIP (accessible usually by just checking a box 'spit bars' as it will not print any Light Cyan, or Light magenta).

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Table 1. The recommended width of the Spit Bars is 3.5 cm (approximately 1.4").

Recommended course of action (In all cases a Printhead Alignment and Substrate Advance Calibration are recommended)

Issue	Bidirectional	Plot rotation/ Smart nesting	Spitbars	Color Calibration	Dynamic Color Correction
Color Misregistration					х
Left-Right Difference	х	х	Х		
Neighboring area fill dependence	х				
Plot to Plot		Х		х	
Printer to printer				х	
Startup			Х		

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