

Vertical Banding in printed area fills

Latex 800 Series Printers

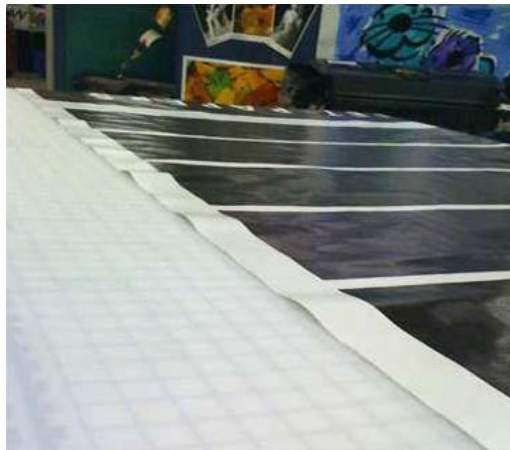


Introduction

This issue is mostly caused because the **substrate is not flat** or because of **wrinkles on the substrate**.

Substrate is not flat

If the substrate does not lie flat when it comes out of the printer, but has shallow waves in it, you are likely to see defects in the printed image, such as vertical stripes. This can happen when you use thin substrate that becomes saturated with ink, it can also be caused by the combination of heat and vacuum pressure that is applied to the substrate.



Possible Cures

1. Check that the substrate type you have loaded corresponds to the substrate type selected in the front panel and in your software.
2. If you are using a paper-based substrate, try changing to a thicker substrate.

Wrinkles in the substrate

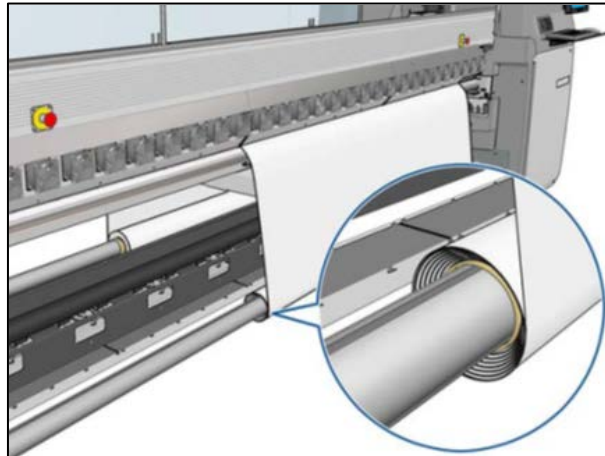
Wrinkles in the substrate indicate that the substrate settings that control the substrate shape are not optimized. This can cause various printing defects such as colored bands in area fills in the vicinity of the wrinkles.

There are various reasons why wrinkles could appear while printing:

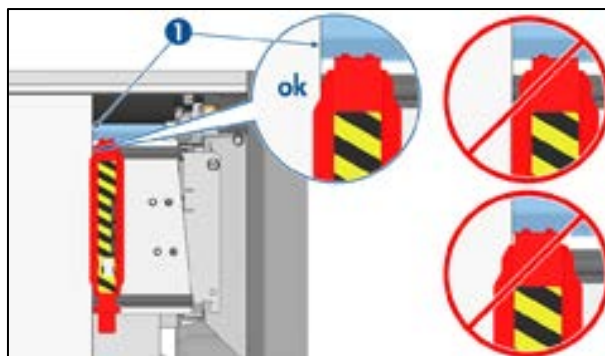
- Incorrect loading of the substrate
- Incorrect routing of the substrate through the printer
- Incorrectly positioned edge holders
- Drying and curing temperatures too high for the substrate
- Differential expansion of the substrate due to variations in temperature, perhaps caused by a large difference between drying and curing temperatures
- Insufficient tension or non-uniform tension across the substrate

Possible Cures

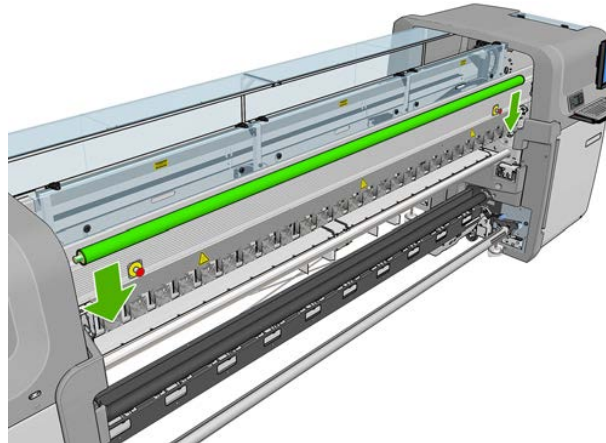
1. Check that the substrate you are using is the same type that you have selected in the HP Internal Print Server.
2. Try to minimize skew while loading the substrate. Double check that you are loading the substrate using the correct process.
3. Check that there is no telescoping of the input roll.



4. Check that the substrate edge holders are correctly positioned.



5. Try using the Diverter rollers. You are recommended to use both diverters when printing on self-adhesive substrates, and the output diverter (only) when printing on fabrics.



6. Try increasing the substrate tension.
7. Increase the vacuum.
8. Try reducing the drying and curing temperatures, and minimize the difference between the two temperatures.
9. Consider changing the printer configuration. For the Latex 850 use the roll-to-free-fall configuration as it is least prone to wrinkles.
10. If you cannot get rid of the wrinkles, try raising the carriage beam slightly, so that the printhead is not so close to the substrate.

For information on how to adjust printer settings, see the User's Guide.

Vertical Banding in the same color (gray, brown, green)

For more specific types of vertical banding in printed area fills refer to the following troubleshooting.

A small amount of vertical banding (like waves) can be seen, with a frequency equal to or higher than 2.6cm (1"), up to approximately 5-10cm (2"-4") when printing a few specific large area fills of the same color (gray, brown, green)

Possible Cures

1. Check that the substrate is correctly loaded, this is the most likely cause of this type of vertical banding.
2. Reduce the heating temperature of the print as much as possible, without impacting the image quality
3. Check that there is no telescoping of the input roll.
4. Reduce the level of vacuum (via the add a new substrates process) as much as possible.
5. Reduce the ink limit (through the add a new substrates process or in the RIP), this can help to reduce this issue on some substrates.
6. Use the diverter rollers. You are recommended to use both diverters when printing on self-adhesive substrates, and the output diverter (only) when printing on fabrics.

7. Consider changing the printer's configuration. For the Latex 850 use the roll-to-free-fall configuration as it is least prone to wrinkles.
8. Increase the vacuum, to make sure that the wrinkles are not forming in the print zone.
9. If using a unidirectional printmode, try to print in a bidirectional printmode.
10. Make sure that the scan beam height (through the front panel), is set to normal (and not in a custom position).
11. Use a substrate which is less sensitive to rib marks (slightly more rigid).
12. In case of heavy and narrow rolls (with diameter > 25cm (10")) generating a bow on the spindle (mainly the input), use a roll which is less than 25 cm diameter.

This information and more can be found in the Maintenance and Troubleshooting guide

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