

Tips and tricks for tiling applications



HP Latex 700 and 800 Printer Series

Description

Two critical requirements for tiling applications are tile to tile length and color consistency.

The non-uniform dimensional stability of substrates, such as specific wallpapers and SAV, can lead to differences in length from side to side. When substrate shrinkage or expansion occurs, print dimensions will also be incorrect.

Moreover, contiguous tiles with the same solid color background may show differences in color comparing the right side of the first tile and the left side of the second tile.

The aim of this newsletter is to provide complete instructions to print tiling applications with the best length and color consistency performance with the HP Latex 700/800 Series.

For more information on how to do tiling applications with wallpaper, see “How to do wallcoverings with HP Latex 700 and HP Latex 800 Printer Series” [cookbook](#).

In addition to wallpapers, tiling applications can also be done with self-adhesive vinyl. This guide applies to both substrates.

Steps to obtain the best tiling performance

1. Ensure that your environmental conditions are suitable for the best print quality, with relative humidity between 40 and 60%, and temperature at 20 to 25°C.
2. Load the substrate as usual. If available, download the OMS from the Media Locator. If not, clone it from the most suitable generic.
3. Choose print modes of **8p or higher number of passes**, with the lowest density possible.
4. Ensure the **TUR tension mode** selected is “**Do not apply tension**”. To choose this print mode setting, select **Control Panel > Substrate Library > Your substrate preset > Edit print mode > Advanced Settings**. The “Do not apply tension” TUR mode is set as default for wallpaper. For self-adhesive vinyl, it must be modified by the user.

Installed substrates

Self-Adhesive Vinyl

Paper and WallCovering

Textile

PVC Banner

Canvas

Film

Coated Paper (mor... 📄 ...

PRINT MODES

Ball 6p_6c_90 6p6c90	✎	🗑
Coa glos 32p6c110_W... 32p6c110WUF...	✎	🗑
8p_6c_100 8p6c100	✎	🗑
12p6c110_W... 12p6c110WSP...	✎	🗑
12p_6c_120 12p6c120	✎	🗑

Add print mode

Substrate " Coated Paper (more than 90 gsm-glosshp " : edit print mode ...

White ink density

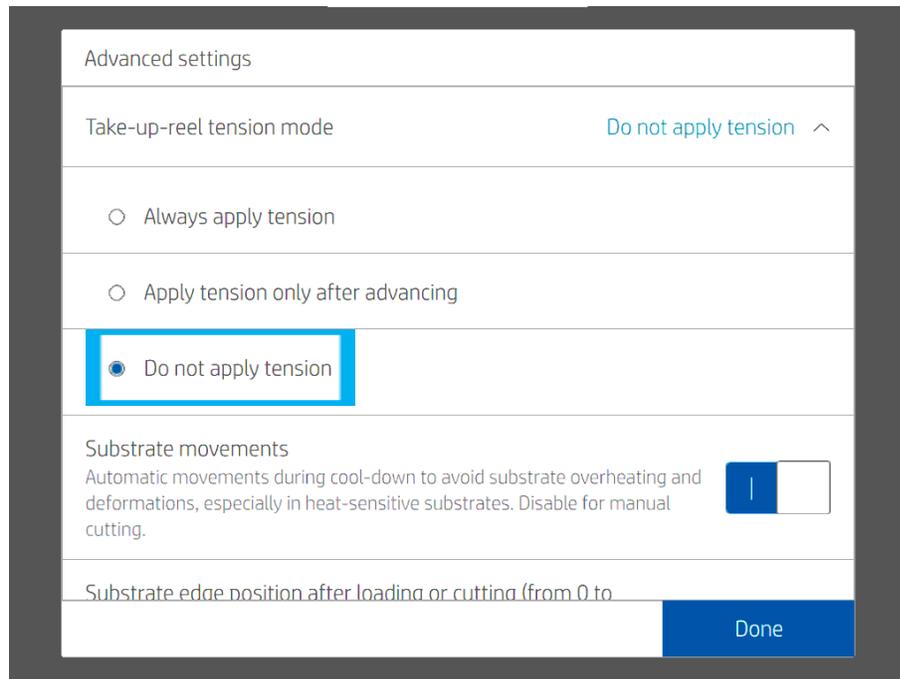
Curing temperature (from 70 to 115 °C)
 If ink is not cured, increase temperature. If substrate deforms, decrease temperature. - 90 +

Vacuum (from 0 to 100 mmH20)
 If substrate suffers from smears or lifts from print zone, increase vacuum. If vertical banding or substrate not advancing, decrease vacuum. - 20 +

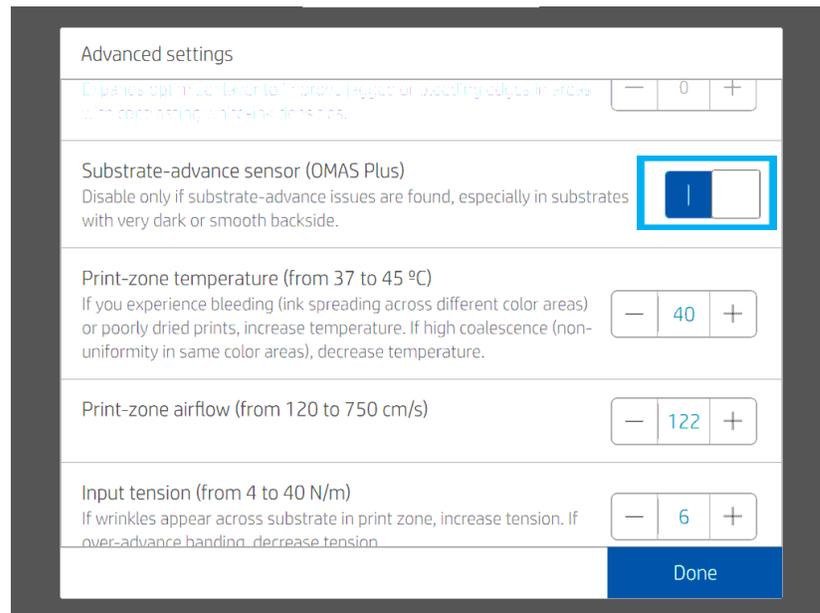
Inter-pass delay offset (from 0 to 1550 ms)
 Recommended for heat-sensitive substrates. If substrate deformation and/or smears occur, increase delay and decrease curing temperature. If ink is not cured, increase delay or curing temperature. - 0 +

Advanced settings ↗

Cancel
Save print mode



5. Ensure that the **substrate-advance sensor (OMAS+)** is **enabled** under the advanced settings of your print mode (**Control Panel > Substrate Library > Your substrate preset > Edit print mode > Advanced Settings**).



6. **Total length accuracy adjustment:** Even if the length of the tiles is consistent from tile to tile, it may not exactly match the original size of the job. This variation in size depends on the nature of the substrate and how much it expands or contracts with heat, but can be compensated for using a scale factor in the RIP:
 - a. Rip and print a **first-meter stabilization plot** and a **sample of a tile**.

IMPORTANT: Both images must be ripped together as one single job and printed with the print mode that will be used later in the tiling job.

- The first-meter stabilization plot can be any image of a linear meter length; any job that won't be used for tiling or a low ink density image.
 - b. Measure the sample tile and compare the length with the original image size.
 - c. Apply the scale factor in the RIP accordingly.
 - d. This total length accuracy adjustment is only required when printing with a specific substrate and print mode for the first time.
7. **Print the tiling job:** Once the substrate has been characterized and a scale factor has been chosen, we can proceed to print the complete tiling job.
- a. **Connect the substrate to the TUR and calibrate the TUR.** See section “How to best load the TUR for tiling application”.
 - b. Job preparation:
 - Rip a **first-meter stabilization plot** together with the complete tiling job. This plot is required every time a tiling job is printed.
- IMPORTANT:** Both images must be ripped together as one single job.
- Flip odd tiles, using the RIP feature.
- c. Print the first-meter stabilization plot with the tiling job.

NOTE: With future FW releases PLS_30_22_XX.X, the first-meter stabilization plot will only be required once at the beginning of every roll.

Length repeatability specification

The aim of the first-meter stabilization plot is to stabilize substrate movement.

The maximum length variation of a tile that can be expected with HP Latex 700 and 800 is:

- +/- 0.5 mm/m when printing the first-meter stabilization plot and following the previous recommendations.
- +/- 1 mm/m without printing the first-meter stabilization plot but following the rest of recommendations.

Color consistency specification

The best color consistency performance is achieved with print modes of 8p or higher. It is also important to ensure environmental conditions are suitable for the best print quality, with relative humidity at 40 to 60%, and

temperature between 20 to 25°C. Starting printing with the printer in a cold state is not recommended; the stabilization plot helps to warm up.

The official color consistency specification is <1.5 dE for 95% of colors. However, performance is usually within the following ranges:

- 6p/8p: < 1.4 dE
- 12p: < 1 dE

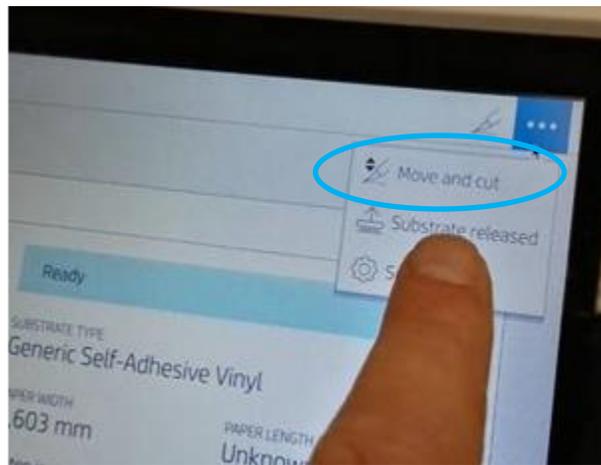
How to best load the TUR for tiling application

A demonstration can be found [here](#).

1. Load the substrate as usual.
2. Load an empty core. Do not forget to close the brake on the 700 and 700W series.
3. Advance the substrate until the leading edge is leveled with the TUR.



4. Release the pinch wheels: **Substrate** > ... > **Substrate release**.



5. Align the right edge of the substrate with the right edge of the entry roll to minimize loading skew.



6. Select **Done** on the control panel to lower the pinch wheels again.
7. Tape the leading edge to the core in the TUR, first the center, keeping it tight so as not to induce a skew, and then the sides.
8. Advance the substrate and engage the TUR by turning it one turn.
9. Perform the TUR calibration from control panel: **Substrate** > **Output Options** > **Calibrate**.