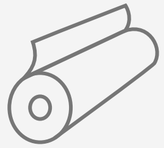
How to do Synthetic Leather applications with HP Latex 700 and HP Latex 800 Printer Series

This document will explain how to do Temporary and Durable applications (including Lamination) with Synthetic Leather substrates.

New Sustainable leathers Substrates.

What you will need



Synthetic leather substrates

SW tools
(RIP, Adobe tools, etc.)

Printer

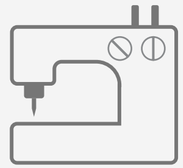
Loading accessory

Liquid laminant
(optional)

Protective gloves and googles
(for liquid lamination optional)

Hand-Roller
(optional)

Cutting device or scissors



Sewing machine

Preparing the substrate

1. Choose the right substrate

Make your decision based on your needs

Synthetic leather is a multi-layer coating on top of a textile backing.

Leather surface can be embossed for a more attractive finishing and can be used as a substitute for leather.

HP Latex inks preserve the embossed touch and feel of the Synthetic leather.

There are **3 types of Synthetic Leather printable with HP Latex Technology** based on their composition:

1. **Polyvinyl chloride (PVC) synthetic leather**
   - More durable and tougher
   - Mostly used for upholstery and accessories
2. **Polyurethane (PU) synthetic leather**
   - More flexible, softer and more breathable than PVC
   - Better touch and feel than PVC
3. **Polyurethane bio-based synthetic leather,** PU leather partially from vegetable sources like corn, cactus, pineapples leaves, palm, mushrooms, etc.
   - Touch and feel is different in every case due to different production process from different vegetable sources

NOTE: Not all Synthetic leather are suitable for HP Latex 700/800. HP recommends to use substrates published in the HP Print OS Media locator www.printos.com/ml/#/medialocator. Filter by Latex Printer and Type: Synthetic leather, more than 10 materials have been tested and published.

Preparing the substrate

Make your decision based on your needs

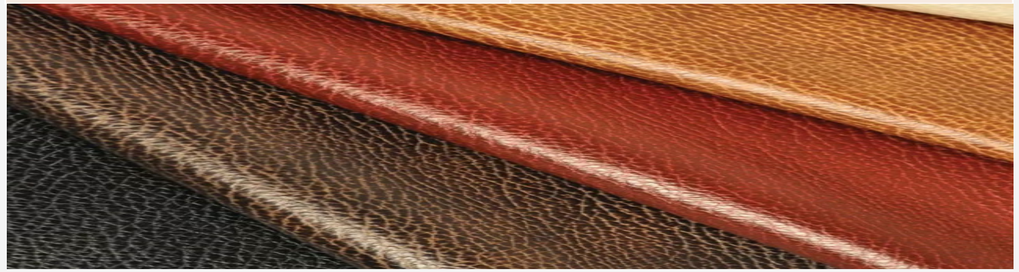
APPLICATIONS			
TEMPORARY up to 6 months (Events, exhibitions, retail, promotional)			DURABLE up to 3 years (Customization)
Upholstery	Interior Décor	Promotional Accesories	Upholstery/Accesories + Top coat Protection
			
HP substrate recommendation			
PVC, PU, PU Bio-based substrates			PVC substrates + Top coat

NOTE: Any other application that requires extra durability performance (such as apparel or shoes) or need to fulfill Regulatory Standards (such as upholstery for automotive) are not the target of this cookbook's recommendation.

Preparing the substrate

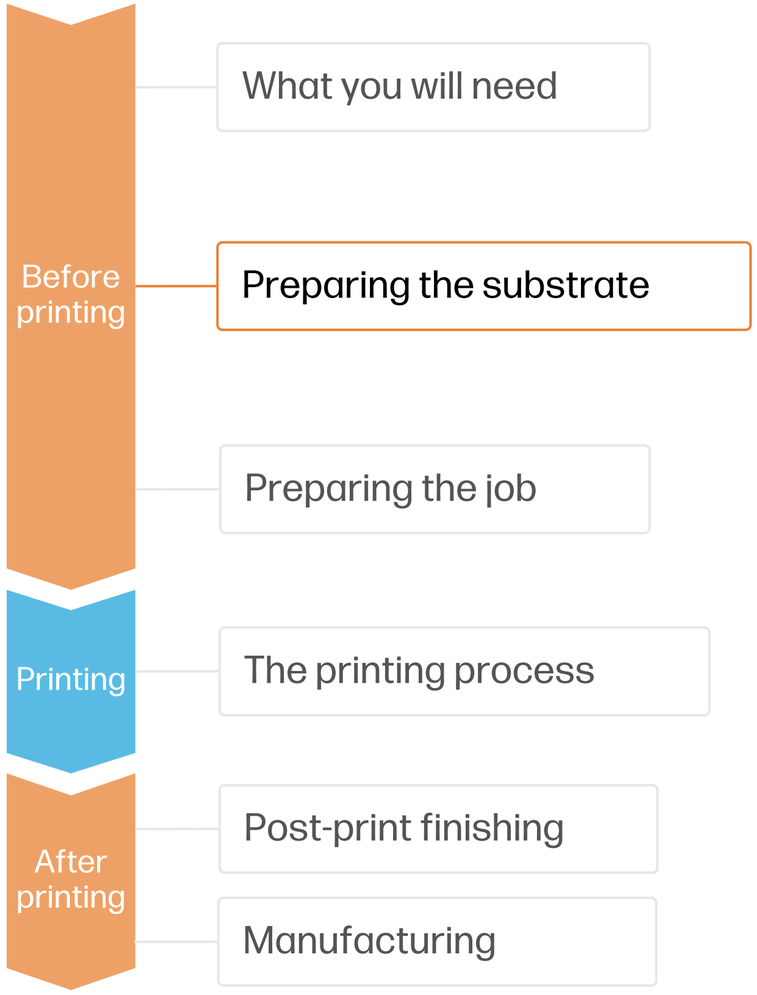
2. Characteristics and Standards

Technical Requirements	
Abrasion Resistance	Flexion
• **Test Method: Martidale** ISO 12947-4 • Threshold depends on product • **Important for Upholstery** • Requires a hard surface	• **Test Method: Bally Flex** ISO 32100 • Threshold depends on product • **Important for Accessories and Shoes** • Requires flexible surface



NOTE: Substrates published in HP PrintOS Media Locator have been tested in **Abrasion Resistance** and **Flexion** with good results for Temporary Applications. Durable applications need topcoat for increasing abrasion resistance.

Preparing the substrate



3. Substrate presets

- Check that the material you are going to use has its own substrate preset:
  a) On the **web**, in the HP PrintOS Media Locator: www.printos.com/ml/#/medialocator
  b) On the printer's **front panel** online search (Substrate Library)
- Download and install.

NOTE: If you cannot find the substrate presets, you can always use the **generic PVC Banner** presets already installed in your printer. If you need to fine-tune some settings, **clone** the existing generic preset and modify it, or create a new one with **the Add new substrate** function on the front panel.

TIP: Learn how to customize your profile by enrolling on the available training HP Latex 700/800 Printer series – Advanced main tasks and maintenance routines on the Learn with HP website.

Preparing the job

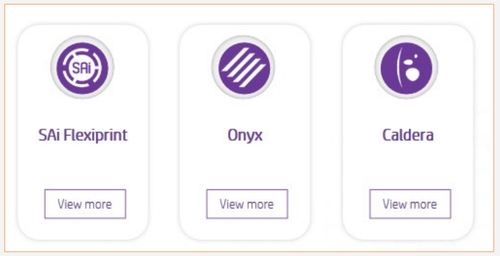
1. Software for designing and editing

Tools such as Adobe Illustrator, Photoshop, and InDesign help you design and edit jobs to adapt them to your needs.

Make your decision based on your needs

2. RIP processes

ONYX, CALDERA, and SAi RIPs have been certified for HP Latex 700/800 Printers series.



NOTE: Please refer to the specific trainings on RIPs on the PrintOS Learn App.

A. Substrate & Printmode selection

- Choose the substrate type (PVC Banner), then select the specific substrate you have loaded on the printer, or a generic preset.
- Afterwards, choose the printmode: **6p mode** gives good quality prints. For optimal color and IQ, go to **8p mode**.

NOTE: Before selecting the substrate in the RIP, it must be loaded onto the printer

B. Finishing: cutting marks & other

- Select the automatic cutter you will use for cutting your jobs.
- Configure the cutting marks for that cutter: trim box, placement, and type of barcode.
- Add **labels** to identify each tile.

NOTE: Each RIP has different ways to set the cutting marks. Please refer to the RIP manuals.

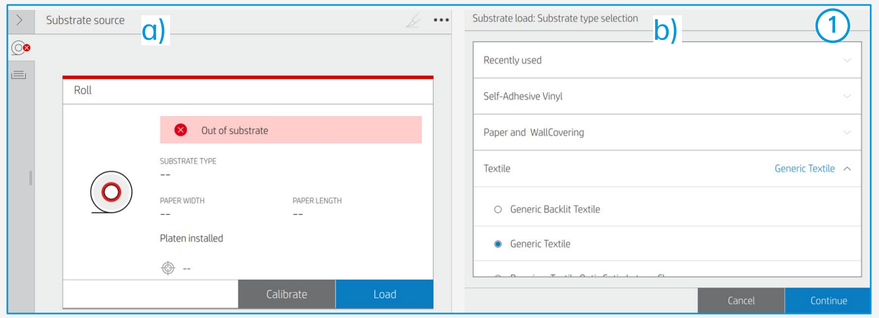
The printing process

Loading substrate & Printing

1| Load substrate from printer Front Panel:

a) From the substrate menu, tab Load substrate.

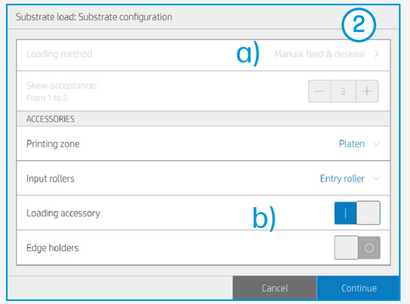
b) Select the downloaded substrate or select a generic substrate from **PVC Banner** and tab Continue.



2| Select the loading options:

a) Select Manual feed & deskew.

b) Select Loading accessory and tab Continue.

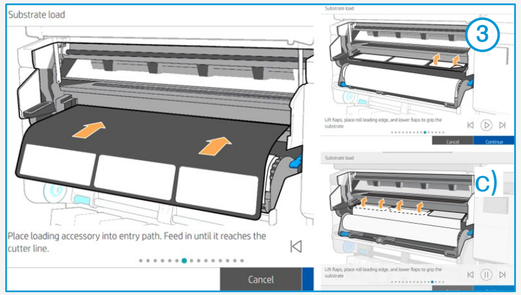


3| Load substrate with loading accessory:

a) Lift the **curing module.**

b) Follow the Front Panel instructions on how to insert the accessory and the substrate.

c) Once the accessory is inserted up to the printing platen and the substrate is attached with the flaps, **lower the curing module** and tab Continue.



TIP: Ensure that the loading accessory is aligned with your substrate width.

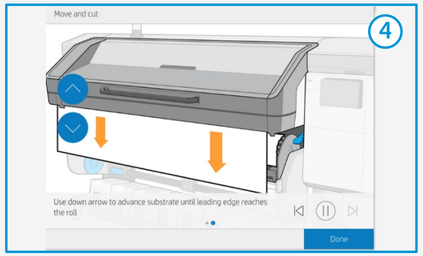
NOTE: Please consult the User Guide for further details on loading accessory installation.
And check in HP Print OS Media locator www.printos.com/ml/#/medialocator if the media needs to use edge holders.

The printing process

Loading substrate & Printing

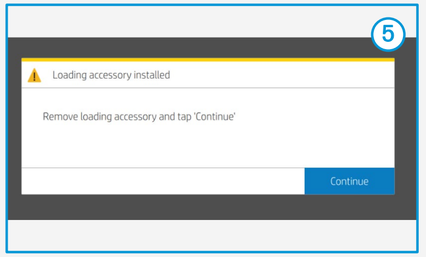
4 | Move substrate

Using the arrows, advance the substrate down until the after curing position. Tab Done.



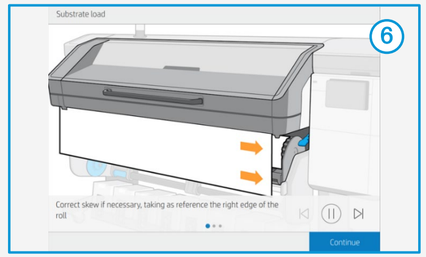
5 | Remove loading accessory

Front panel pops up a message to remove the loading accessory. Tab Continue.

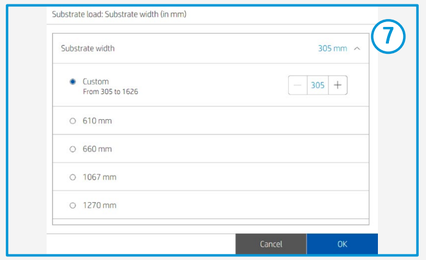


6 | Adjust substrate skew

Next step is to align substrate. Pay special attention to stretchable materials. Follow the Front panel instructions and tab Continue.

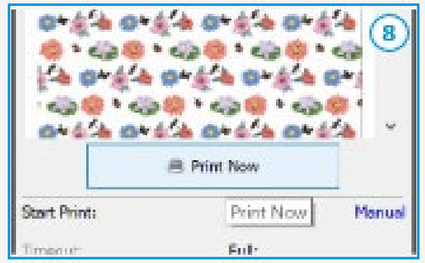


7 | Set substrate width if it is not input automatically by the printer. Tab OK to finalize.



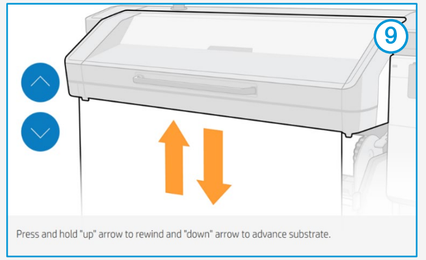
8 | Send job to print from RIP

- Check the RIP has **synchronized** the loaded substrate with the printer.
- Select the correct printmode and set any other settings (copies, placements, etc.).
- Click **Send to print**.



9 | Cut & retrieve printed roll

This can be done in automatic mode or manually.



TIP: Before cutting the printed job, advance the substrate so you protect the printed roll when unloaded.

Once printed, what else?

- Before printing
  - What you will need
  - Preparing the substrate
  - Preparing the job
- Printing
  - The printing process
- After printing
  - Post-print finishing
  - Manufacturing

1. Liquid lamination for Durable Applications

Synthetic leather materials printed with HP Latex700/800 are suitable for **Temporary Applications:** Events, Exhibitions, Retail or promotional accessories. For this reason, they do not need any post-print finishing.

Liquid lamination is recommended to increase the durability of the ink in case of **Durable Applications** Upholstery and accessories.

- It is recommended to manually apply it with a hand-roller prior to cutting into pieces.
- Allow around 1 hours to be dry to the touch.
- Manually applied coating will be fully cured after 24h at room temperature.

TIP:

- **Marabu Clearshield Select** (matte) is a water-based clear coat that is ready to use. It has been successfully tested on published **PVC substrates** for HP Latex 700/800 series. Find PVC Synthetic leather published substrates in the HP PrintOS Media Locator: www.printos.com/ml/#/medialocator.
- More information can be found at Marabu web site Water-based liquid coatings | Marabu Printing Inks (marabu-northamerica.com).
- You can find Marabu Distributors by country in Marabu web page Marabu Sales Partner Search - marabu-northamerica.com. Sales via web page, Digiprint Supplies (Europe) and LexJet (North America).

⚠ HEALTH & SAFETY: Read MSDS before handling coatings.

Once printed, what else?

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  - What you will need
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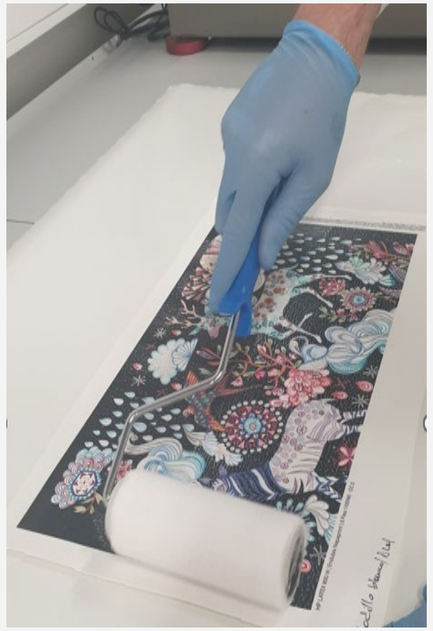
Liquid lamination process



1. Hand-roller application - Roll in both directions to get uniform application (1 coat)

2. How it looks - Immediately after application

3. How it looks - 1 hour after application (dry touch)

TIP:

When applying a varnish or clear coat on printed samples, Overcoat must be removed by setting amount to 0 dpp. By removing the Overcoat, we maximize clear coat adhesion, and we optimize printing cost.

Every Synthetic leather substrate has a different top finishing chemistry. Ink and clear coat adhesion greatly depends on the finishing of synthetic leather chemistry and its interactions. HP recommends performing a compatibility test (tape adhesion test) with ink and clear coat prior to applying the varnish to the job.

Once printed, what else?

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1. Cutting

HP Latex prints are compatible with all standard techniques. With regards Synthetic leather, it can be manually cut with scissor or with a Pressure knife cutter (Flatbed cutter).

Manual

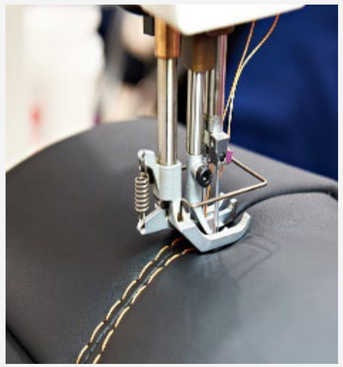
Summa® Legendary Performance

ZÜND swiss cutting systems

Automated

2. Sewing elements

It is possible to sew Synthetic leather substrates printed with latex inks.



NOTE: When working with Synthetic leather printed with HP Latex inks, avoid friction with hard surfaces such as a metallic ruler. Latex prints could become damaged during finishing operations, especially the ones without topcoat protection.

Once printed, what else?

- Before printing
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3. Handling

- To prevent damage, refrain from crumpling, friction against hard surfaces, and creasing printed synthetic leather.
- Roll on a core with print side inwards to avoid folding marks.
- Avoid pressure on printed rolls in storage and during shipment.

Some Examples

Temporary furniture for events

Bean bag

Promotional hand-bag

Remarks

- HP Latex inks are ideal for indoor decoration applications since they are certified: UL Ecologo, UL GREENGUARD Gold certified.
- Enter into “Decoration” with the odorless water-based HP Latex inks

Learn more at:

- HP Latex Knowledge Center
- Learn with HP

Certifications:

Inks meet stringent health and environmental criteria[1]

Unrestricted, full room. No-wait installation or lamination[2]

[1]**Applicable to R Series and 700/800 Printer series HP Latex Inks. UL ECOLOGO® Certification to UL 2801** demonstrates that an ink meets a range of multi-attribute, lifecycle-based stringent criteria related to human health and environmental considerations **(see ul.com/EL)**. HP is the only printing company with UL ECOLOGO® Certified inks in the “Printing Inks and Graphics Film” product category, **see spot.ul.com/main-app/products/catalog/.**

[2]**Applicable to HP Latex Inks. UL GREENGUARD Gold Certification to UL 2818** demonstrates that products are certified to UL’s GREENGUARD standards for low chemical emissions into indoor air during product usage. Unrestricted room size—full decorated room, 33.4 m^2 (360 ft^2) in an office environment, 94.6 m^2(1,018 ft^2) in a classroom environment. For more information, **visit ul.com/gg or greenguard.org.**

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