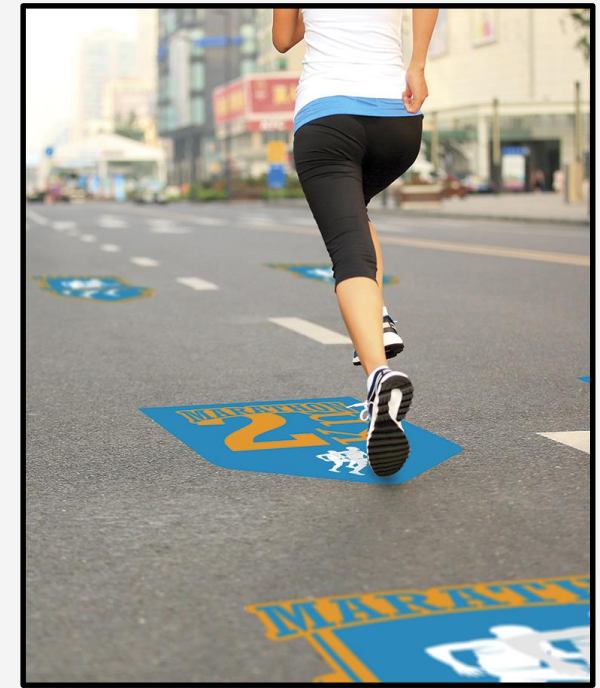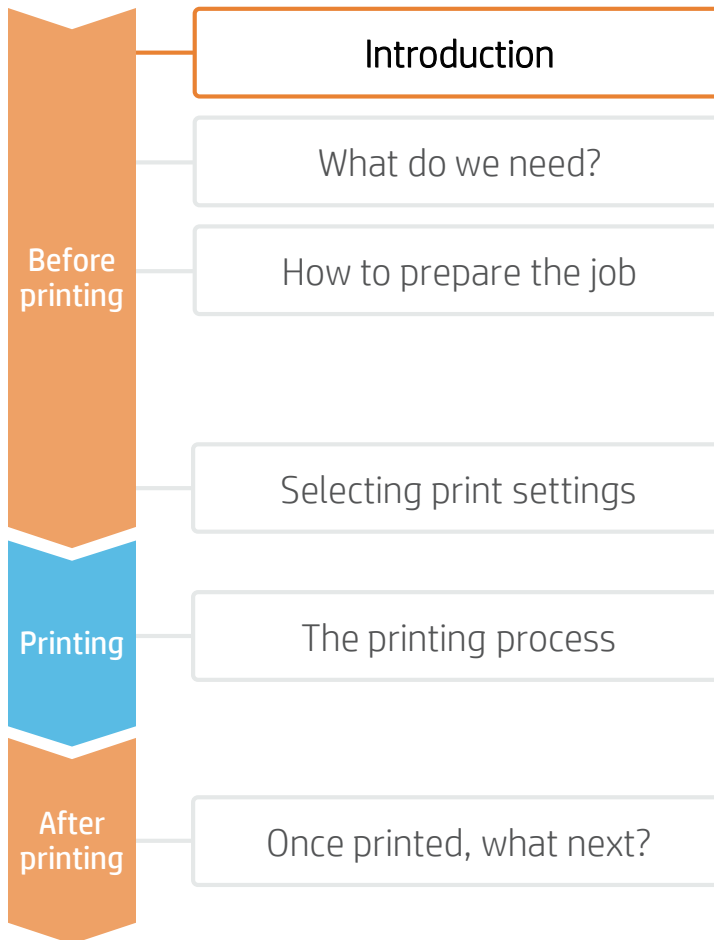# How to print and install Floor Graphics

This document will explain how to print and install floor graphics for indoors and outdoors.

Introduction

Finding their use in **indoor** as well as in **outdoor** environments, floor graphics are a great way to capture the attention of the public. They are usually made of a printed **self-adhesive vinyl and an anti-slippage film over-laminate** on top. The main differences between them are the types of adhesives and the durability of the over-laminate applied, which all depend on the desired longevity of the application and the external conditions where it is going to be used.

Is waiting for the ink to dry before laminating boring? Contrary to those of eco-solvent technology, prints done with HP Latex Technology come out completely dry and ready for lamination. That means you can laminate instantly! This addresses one of the main concerns about productivity when producing floor graphics.

What do we need?
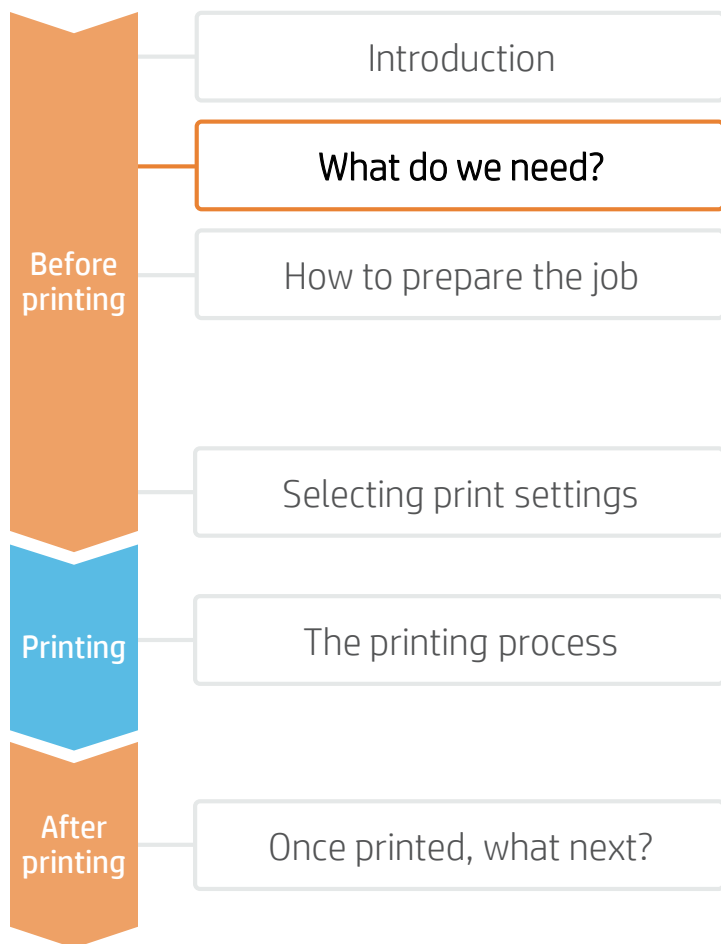
Substrate

Film Laminate
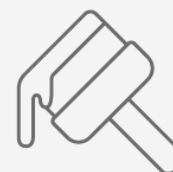
Software tools (RIP, image editor, etc.)

Heat gun

Printer
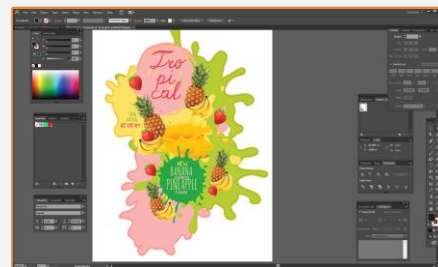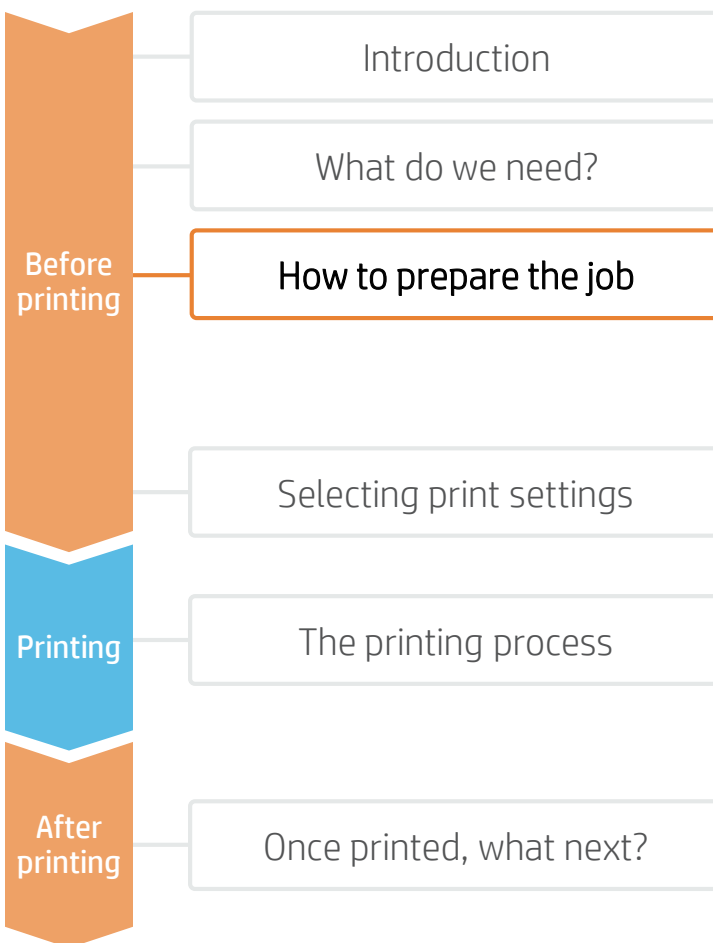
Film Laminator

Cutting device

Water + soap

Squeegee

Brush

3

How to prepare the job

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Printing
- Selecting print settings
- The printing process

After printing
- Once printed, what next?
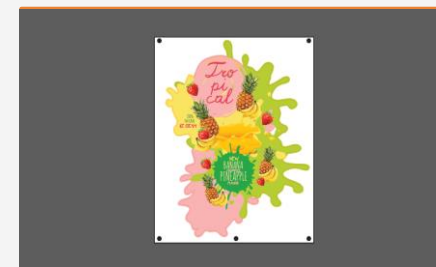

1. Graphic design

Create the graphic using standard design tools (Photoshop, Illustrator…)

📝 NOTE: It's always recommended to provide adequate bleed values to the images on their cut contours to compensate for possible cutting missregistrations.

2. Add cutting marks

Depending on the type of image, design or shape, add cutting lines and marks on signs to be cut using an automatic cutter.
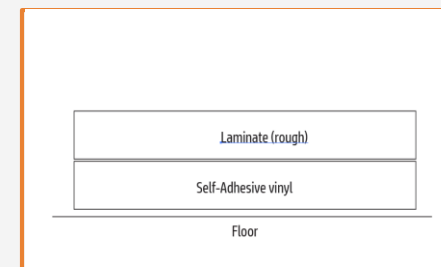
3. Substrate considerations

Floor graphics are normally composed of a substrate base (generally a self-adhesive vinyl on which the sign is printed) and a laminate (to protect the sign and to provide anti-slippage).

There are many product choices. Read the following considerations.

3.1 Adhesive compatibility

There are self-adhesive vinyls that have been specifically designed for indoor or outdoor floor use. The latter ones have a more tacky adhesive.

Check that your substrate (and its adhesive) are adequate for the floor on which the sign will be applied.

3.2 Short term substrates

There are substrates for short-term use (1-2 weeks) that do *not* require lamination, as these substrates present surface roughness.

Check for durability requirements prior to committing to a big job.

3.3 Anti-Slip requirements

Special safety regulations may apply for the area where graphics will be applied, like work spaces, schools, nurseries, public spaces….

European and American slipperiness classifications are normally regulated by DIN 51130, DIN51097 or ASTM C 1028 norms.
Check which slipperiness rating (R-value) is required for your particular application and select your substrate accordingly.

📝 NOTE: To learn more about cutting, consult the following documents:
"Good practices to ensure correct cutting accuracy with HP Latex Print and Cut Solution"
https://hplatexknowledgecenter.com/applications/good-practices-ensure-correct-cutting-accuracy-hp-latex-print-and-cut-solution

Cookbook on HP Latex Print and Cut Solution
https://hplatexknowledgecenter.com/applications/cookbook-hp-latex-print-and-cut-solution

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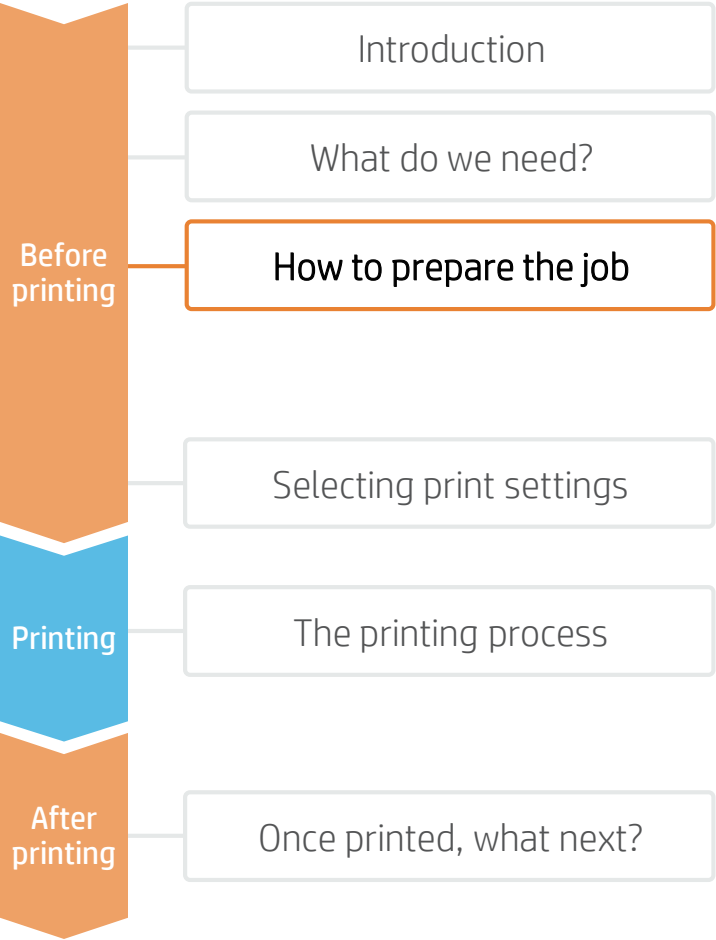
4. Tested substrates on latex platforms

The list below includes floor graphic solutions that have been tested on, at least, one latex printer.
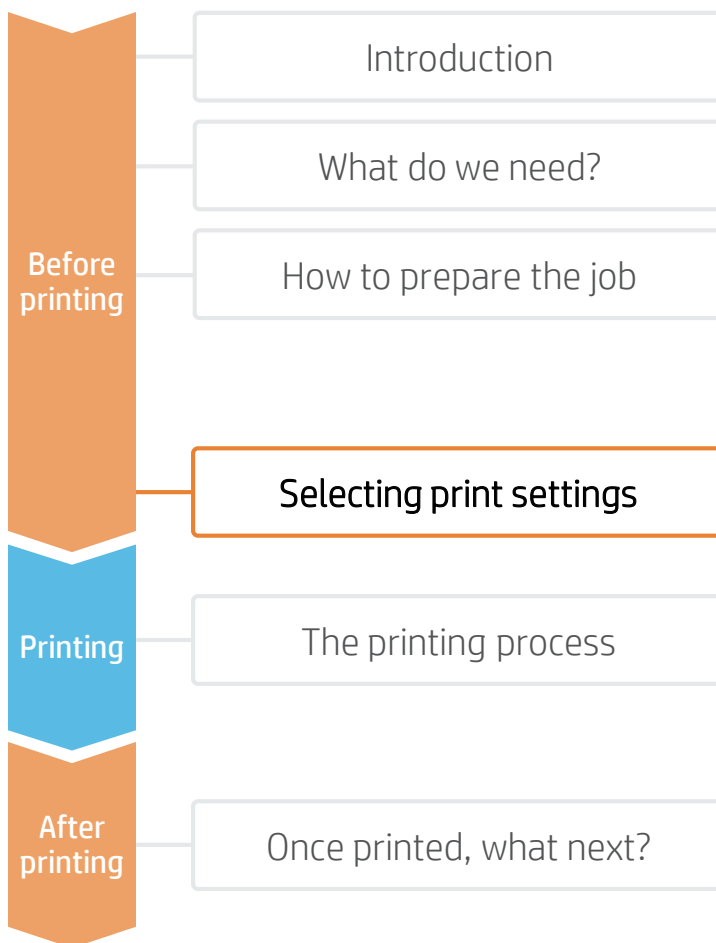
Printable products

Product name	Subst	Thickness (microns)	Slip Certification (DIN51130)	Use
Neschen UV dot print'n'walk	PVC	200	R9 (Does not require laminate)	Indoor
3M 40C-10R / 40C-20R / 40C-114R Controltac	PVC	75	NA	Indoor
3M 48C-20R Envision	PVC-free	80	NA	Indoor
3M 3662-10	PVC	50	NA	Outdoor
Mactac streetRap	PVC	100	NA	Indoor / Outdoor

Protection (Laminate) Films

Product name	Material	Thickness (microns)	Slip Certification (DIN51130)	Durability / Other certifications
Neschen Filmolux easy clear sand	PVC monomeric	200	R9	Medium (6 months)
Neschen Filmolux Nippon Plus	PVC monomeric	200	R9	Medium (6 months)
Neschen Filmolux FGS	PVC Polymeric	185	R9	High (1 year) EN 14904 for sport areas
Neschen Filmolux Scratch	PET	130	R10	Short (1 month)
Neschen FGS R11	PVC	140	R11	Medium (6 months) DIN51907 Class A
3M 3645	PVC	200	R9	Indoors
3M 3647	PVC	500		Indoors and Outdoors. SRV 49 (EN1341) , SRV 40 (EN1342)
Mactac Permacolor Floorgrip	PVC	150	R11	Indoor/Outdoor
Mactac Permacolor StreetLam	PVC	385	R12	Outdoor

Consult **HP Media Locator**: https://www.printos.com/ml/#/homeMediaLocator for more information.

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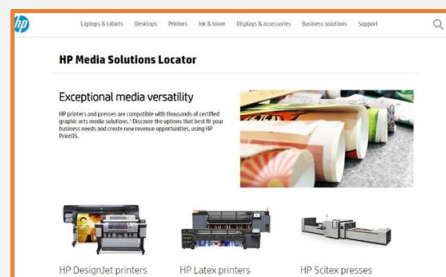
Selecting print settings

Once the right printing and protection substrates are selected based on the application's requirements, we're almost ready to print.

First we need to select the right printing settings. These settings are found within the **substrate presets**.

Use different media presets based on the substrate being used

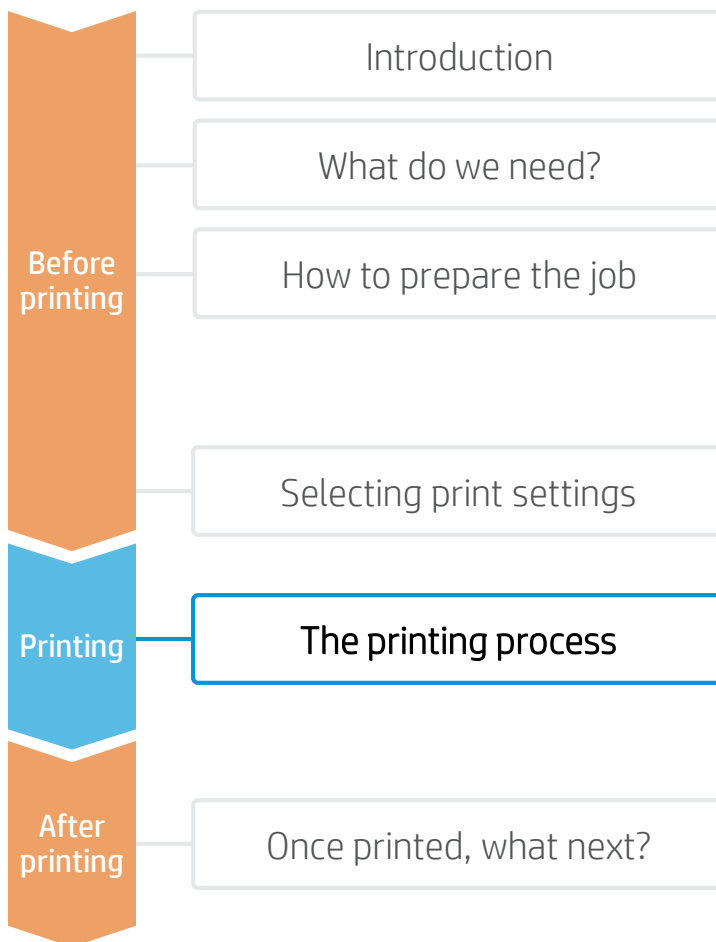## Self-Adhesive Vinyl substrate presets

Many Self-Adhesive Vinyl substrates have been tested at hp on different Latex printers. Substrate presets have been created for specific substrates and printers and are available to download from the HP Media Locator:

https://www.printos.com/ml/#/homeMediaLocator

Find the right profile by filtering for printer and substrate type.

If the substrate you need to print on has an substrate preset available, we recommend downloading, installing, and using it on your printer and RIP. If there is no substrate preset for the specific substrate being used, using a "Generic Self-Adhesive Vinyl" substrate preset may be a good starting point option.

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The printing process

Rip the artwork after selecting the corresponding substrate preset for the Self-Adhesive Vinyl. Send the output to the printer's queue (L1500, L3X00, R-series) or directly to the printer (L1X0, L2X0, L3X0, L5x0). .

Load the substrate on the printer as *Generic Self-Adhesive Vinyl or* use the specific preset previously downloaded.
Follow the loading process for your printer.

Use the take-up reel if needed. We recommend using it for large jobs.

Select the ripped job and drag it to the printer's queue
(L1500, L3X00, R-series).

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📝 NOTE: Regarding printmode selection: Select "**Frontlit**" modes (110-120 ink depending on the printer) to print most floor graphic applications.

Press print

Once printed, what next?
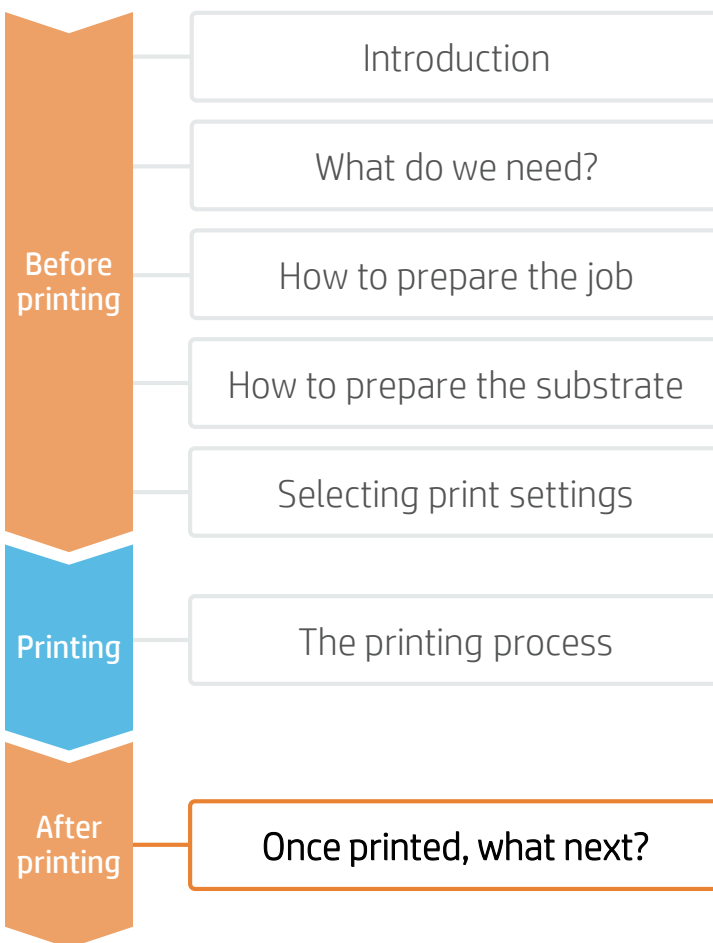
1. Handling Samples

Handle rolls with care.

It is recommended to use gloves to prevent accidental cuts, and also to avoid leaving fingerprints on the surface.

2. Laminate Samples

Most floor graphics need to be laminated using a film. This film is required to protect it and to provide anti-slippage. Use the lamination settings provided by the manufacturer.

📝 NOTE: Lamination can be performed right after printing. You do not need to wait.

📝 NOTE: We recommend storing laminated rolls with the laminate facing out.

3.Cut Samples

Place the sign on a table or in a roll cutter and cut the sign.

📝 NOTE: To learn more about cutting, consult the following document:

"Good practices to ensure correct cutting accuracy with HP Latex Print and Cut Solution" https://hplatexknowledgecenter.com/applications/good-practices-ensure-correct-cutting-accuracy-hp-latex-print-and-cut-solution
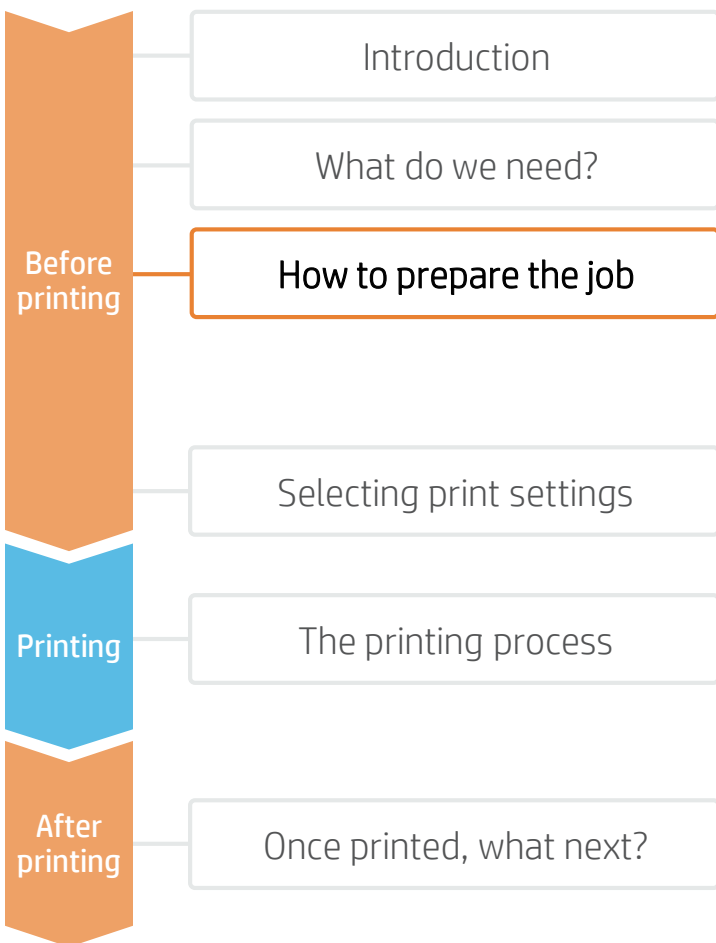

4. Prepare the Floor

Remove dust particles using a broom and clean the floor using an all-purpose cleaner. Remove any remaining contaminant with an industrial-strength cleaner. Clean an additional area around where the sign will be applied.

📝 NOTE: Any dust or wax residue may affect adhesion performance.

5. Application Considerations

Floor graphics, when wet, may become slippery, so to avoid personal injury due to slipping, please take measures to minimize or prevent the floor graphics from getting wet. For example, place floor graphics far enough away from entryways that they stay dry, use doormats to reduce moisture at entryways, and clean up water, spills or other liquids immediately.

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6. Application on Smooth Floors

Remove 25 cm (10") of the liner on one edge of the sign. Apply the sign using a soft squeegee (like a 3M PA-1 Blue or Comply Squeegee), removing the liner as the sign is applied.

📝 NOTE: To prevent sign lifting we recommend to apply signs on low traffic zones.

📝 NOTE: To prevent the sign from lifting, we recommend not leaving sharp corners. Create round corners with a cutter and a coin if not done previously.

📝 NOTE: When applying signs outdoors, we recommend taking extra care to avoid doing so below the minimum application temperature provided by the media manufacturer.


7. Application on Rough Floors

To get good adherence on rough floors, the vinyl needs to perfectly conform to the floor.

Apply the vinyl by hand without pressing it down. Then use a heat gun to soften it, and with the help of a foam roller, press the sign down while the vinyl is still soft to help it conform to the shape of the floor.

8. Cleaning

Follow the recommendations provided by the media manufacturer. If samples will be cleaned with chemical products, it is mandatory to laminate them.

9. Signs with Multiple Panels

When applying big signs that require tiling applications, we recommend not overlapping the different sign parts. To prevent the sign from lifting, we recommend the butt seam application technique.
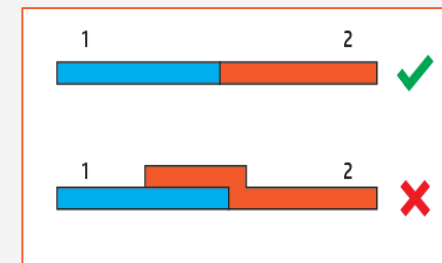
Floor Graphics on latex inks

Learn more at: www.hplatexknowledgecenter.com

You can find templates to use at HP Application Center.
- Open the Roll-ups app at www.hpapplicationscenter.com.
- Select the "**Objects**" tab from the left-hand navigation bar.
- For editable social distancing and general hygienic themed templates and design illustrations to create your own floor graphic, select the "**COVID-19**" folder and select the required sub-folder.

Partnership:

RIPS and Print preparation:

Finishing:

keep reinventing