

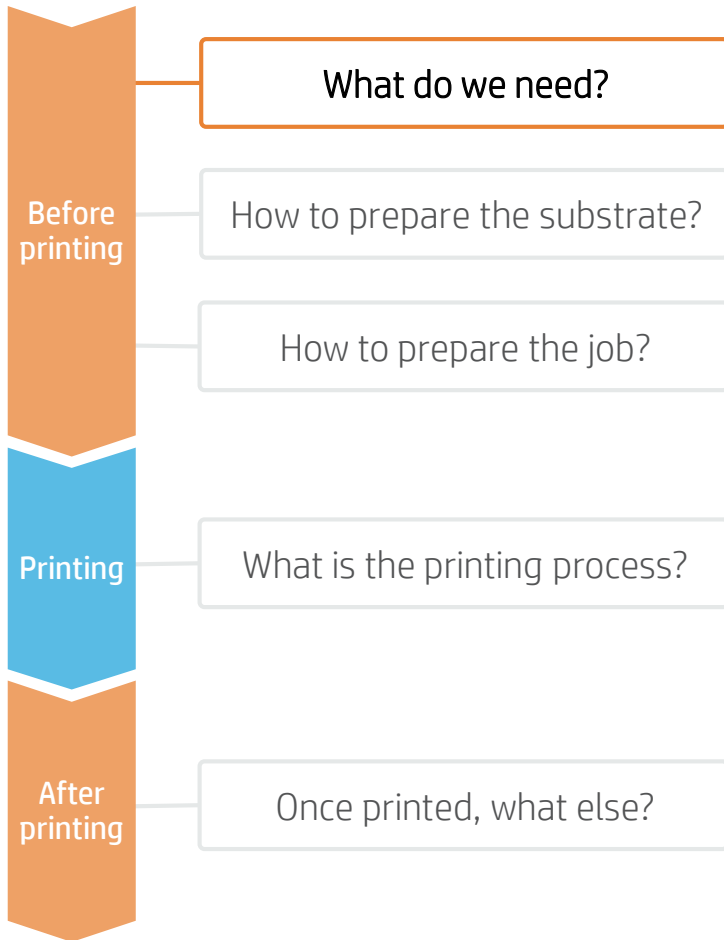
How to print window graphics on clear substrates

This document will explain how to print on clear substrates, either Self-Adhesive vinyl or Polyester films, to create window signs.

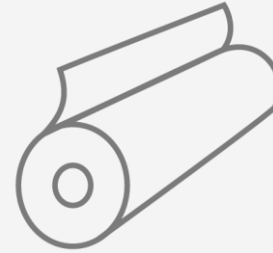


How to print on clear adhesive films

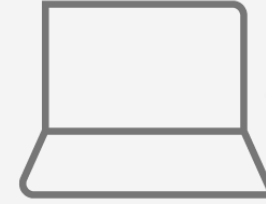
What do we need?



Printer



Substrate
(clear PET or
clear SAV)



SW tool
(image editor
and RIP)



Cutting
device



Cutter



Window
cleaner



Water



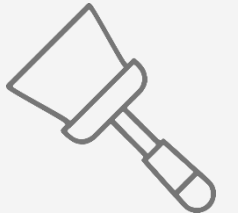
Spray



Liquid
soap



Window
squeegee



Window
scraper



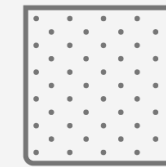
Transfer
tape



Tape



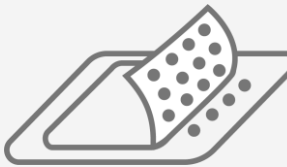
Tape
measure



Lint-free
cleaning cloth



Bubble
level
(optional)

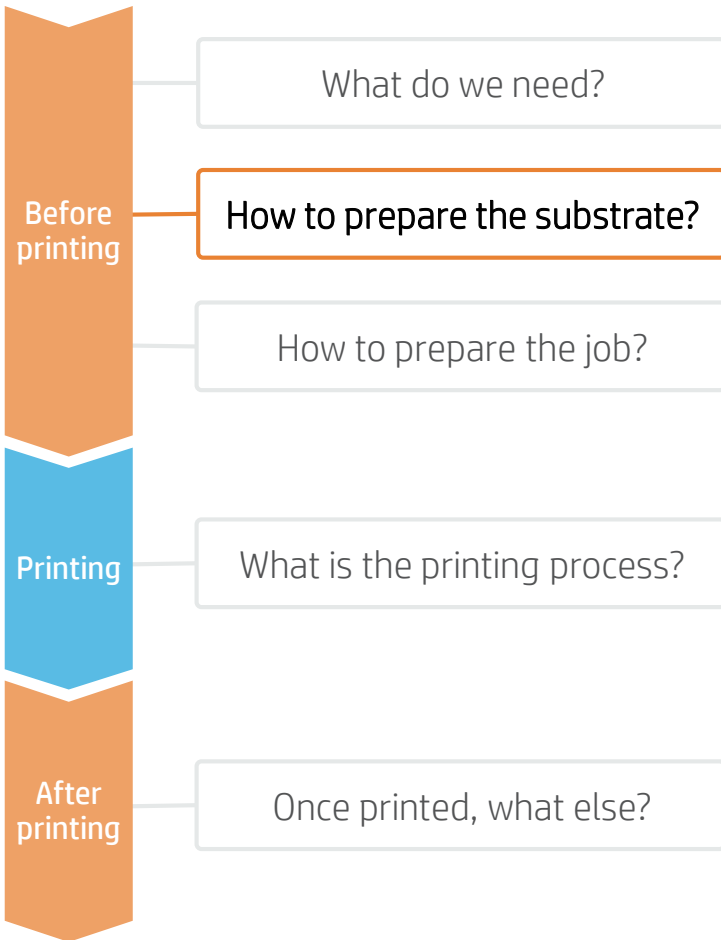


Laminate
(optional)

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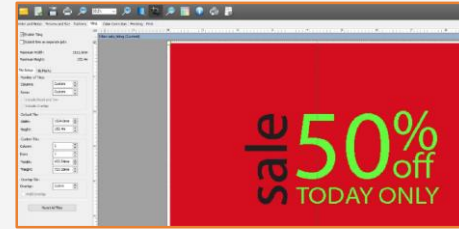
How to prepare the substrate?



1. Measure window

Measure the size of the window and adjust the graphic to that size. If covering a window from edge to edge, leave a 2-3 cm excess margin on each edge.

NOTE: Depending on the size of the window graphic, the film can be applied vertically or horizontally.



2. Big windows

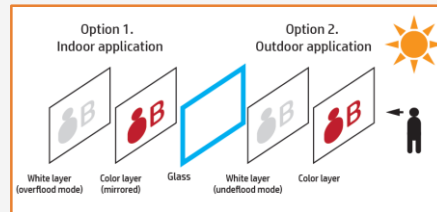
If decorating a big window, it may be necessary to use more than 1 piece of film. In this case, adjust the image to allow 2-3 cm of overlap between the different tiles that compose the whole image.



3. Substrate selection

Select the correct substrate for your application: clear vinyl provides an economical solution, while clear PET has higher transparency.

NOTE: If application is done using the wet technique, ensure you use a substrate with solvent adhesive. Water-based adhesives may leave a milky finish on contact with water.



4. Side installation

Depending on whether the application side is to be on an interior or exterior surface, and from where the sign will be observed, the chosen printmode may change, especially if white ink is used.



5. Side installation (indoors)

If sign installation is to be done indoors and the sign needs to be viewed from outdoors, the image may need to be mirrored and the white print mode selection should be **overflood** or **spot**.



6. Side installation (outdoors)

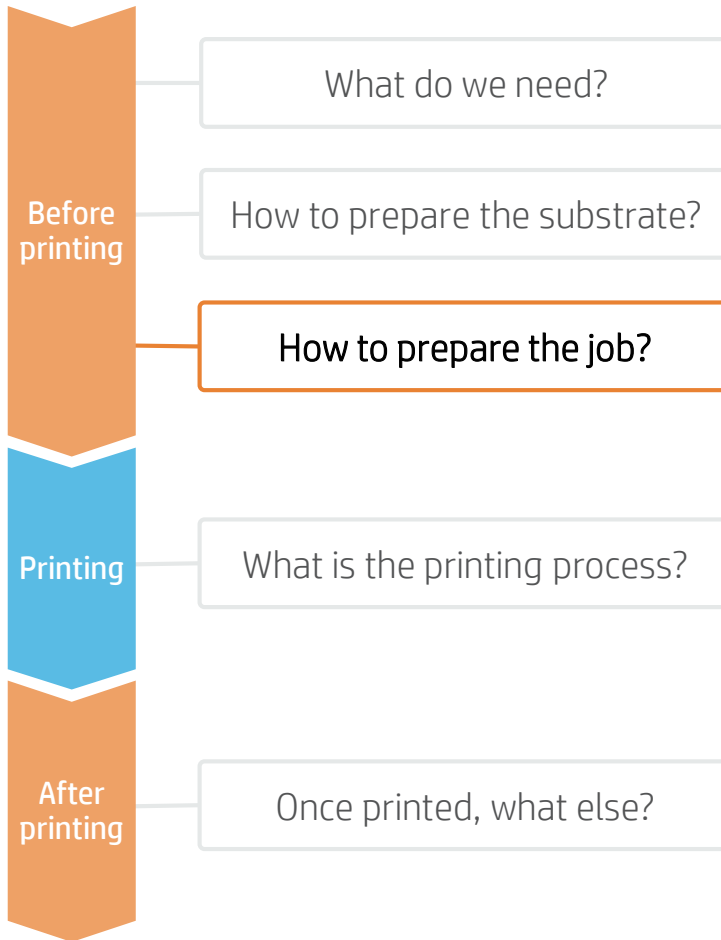
If the installation and viewing side is outdoors, the image may not need to be mirrored and the white printmode selection should be **underflood** or **spot**.

TIP: Play with different amounts of white, in both white modes, to create more or less opaque layers with different light diffusion capabilities.

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How to prepare the job?

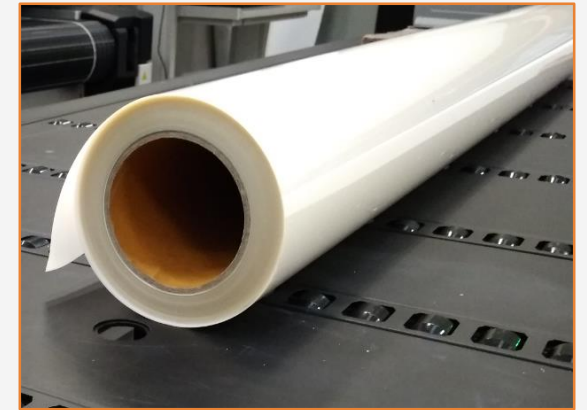



Use different media presets based on the substrate being used: (PET or vinyl)

Vinyls: generic self-adhesive vinyl



PET's: generic polyester film

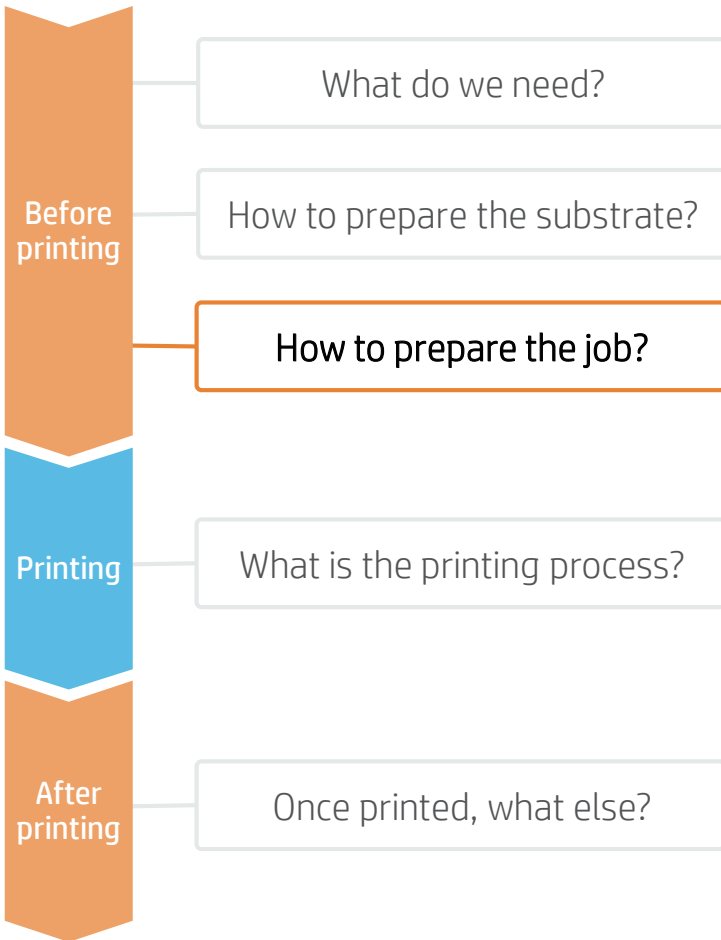


 **NOTE:** To print with white, please refer to the cookbook "How to print with White".

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How to prepare the job?



Clear substrate (PET and vinyl) media presets

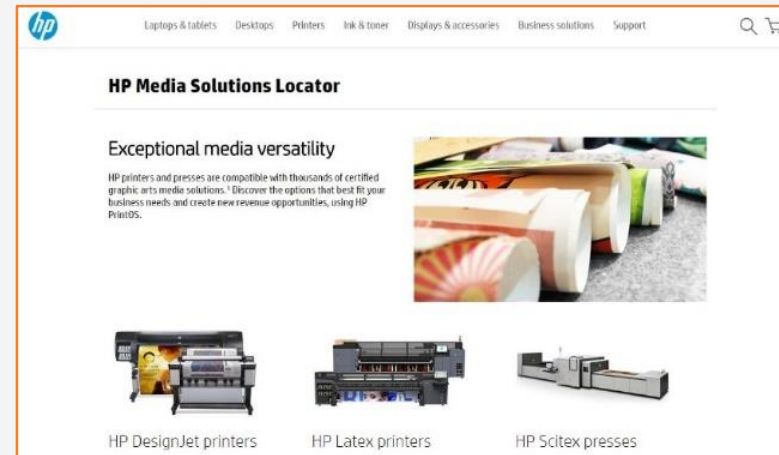
Many clear substrates have been tested at HP.
In some cases, a specific media preset has been created and is available for downloading.

- Visit: <https://www.printos.com/ml/#/homeMediaLocator>

Filter by **Printer > R1000 or Printer > R2000 and Application > Window Graphics**.

You will see all the available media profiles for this application.
If the media selected has an available media preset, we recommend downloading, installing, and using it on your printer and RIP.

If there is no media preset for the specific substrate being used, the Generic Self-Adhesive Vinyl or the Generic Polyester Film media presets may be a good starting point from which to experiment with options.



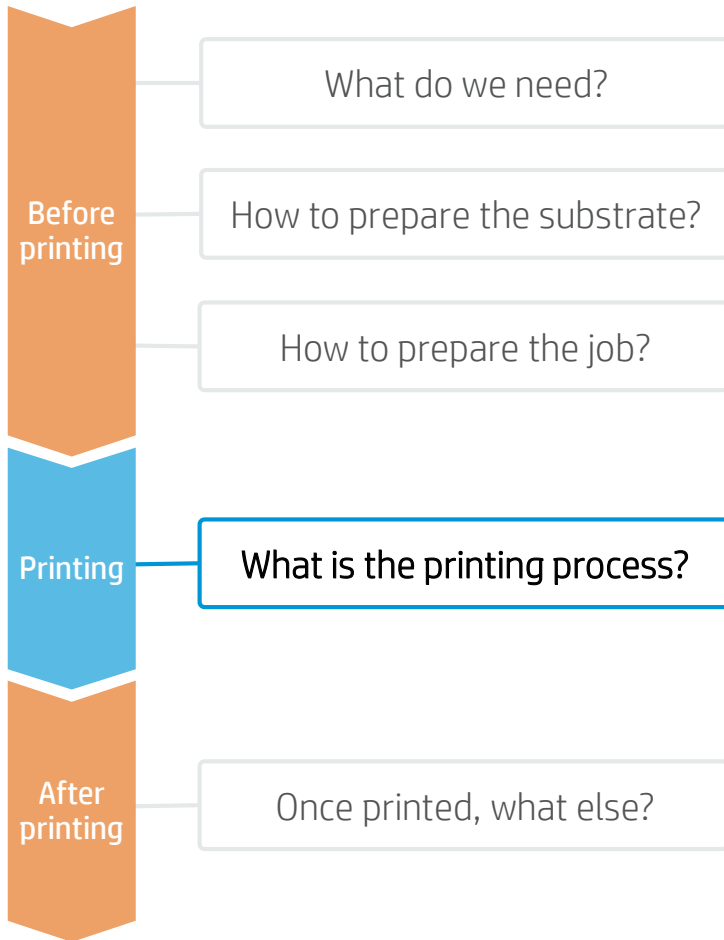
NOTE: IMPORTANT! Clear PETs are generally available with 2 types of coating: PETs with coatings for UV inks, and PETs with coatings for Solvent inks.

Latex inks are mainly compatible with PETs with coatings for Solvent inks. We can not guarantee full compatibility with PETs for UV inks, especially when applied by following the wet technique.

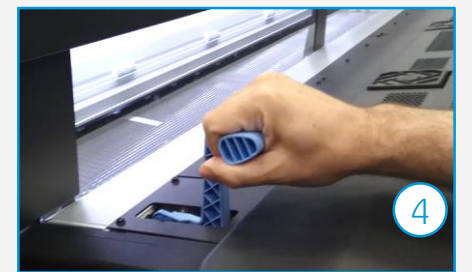
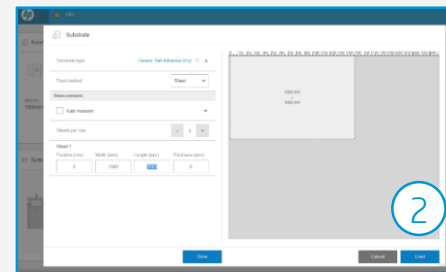
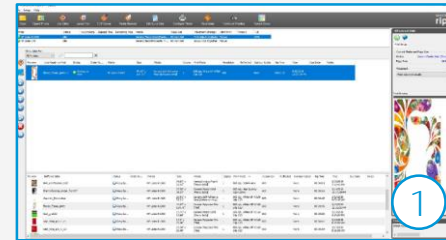
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What is the printing process?

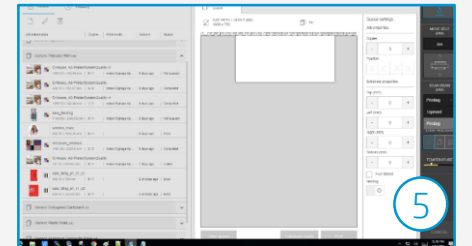


1. Rip the artwork after selecting the corresponding media preset and print mode for a clear substrate. Send the output to the printer nest.
2. Load the substrate on the printer as **Self Adhesive Vinyl > Generic Self-Adhesive Vinyl or Plastic Films > Generic Polyester Film**, or by using a specific preset previously downloaded.
3. Follow the loading process.
4. Activate HS level if needed.
5. Activate HS. Select the ripped job and drag it to the printer queue if needed.



 **NOTE:** Regarding printmode selection:

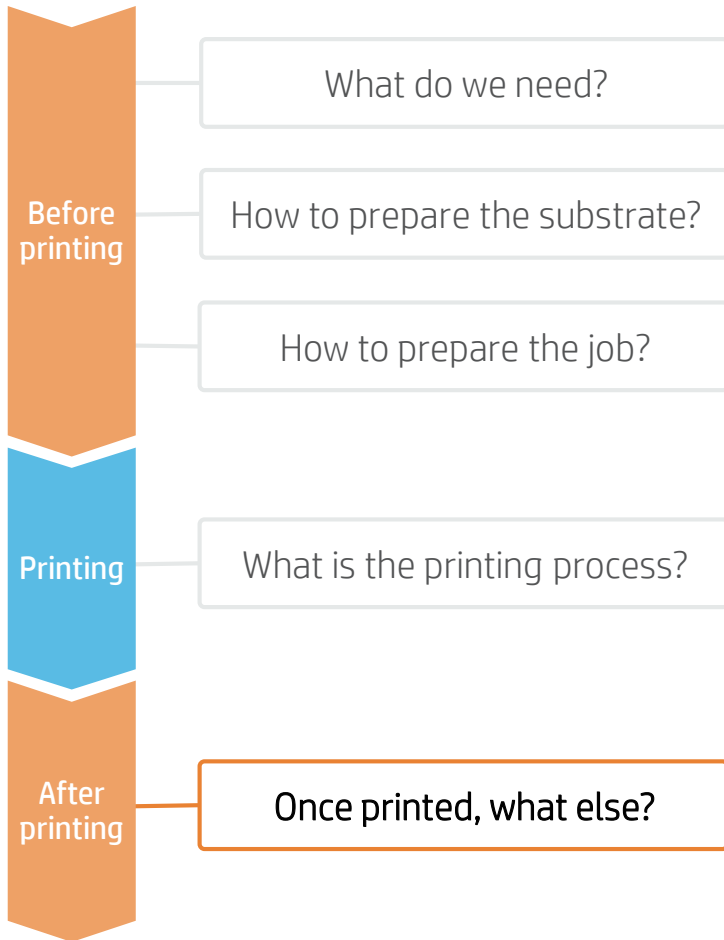
- Select **High Quality** or **Indoor Signage** modes to print images that do not require white.
- Select **White UF W260** mode on substrates **installed and viewed from the same side** (generally outdoors). In this mode, a white ink layer is printed first and then a color layer is printed on top of it. There is the possibility of reducing the amount of white ink if less opacity is required.
- Select **White OF W160** or **White OF W100** modes on substrates **applied on one side and viewed from the other side** (generally applied indoors and viewed from outdoors). In these modes, a color layer is printed first and then a white layer is applied on top.
- Select **White SP W260** or **White SP W100** modes to print images where white is **not** mixed with other colors in the same area.



How to print on clear adhesive films



Once printed, what else?



1. Handling samples

- Handle samples with care! It is recommended to use gloves to prevent leaving fingerprints on the surface. We recommend rolling the printed samples on the outside of an empty core to prevent leaving accidental folding marks.
- Follow media vendor instructions to protect and store rolls.



2. Pre-cut samples

- If wrapping windows from edge to edge, pre-cut samples with 2-3 cm margins on the edges that may touch the window frame.
- If using contour cuts, cut the samples to their final dimensions with 2-3 cm margins on the edges that may touch the window frame.



NOTE: We have cut different clear films on a Zünd XL3200 table cutter using the following settings:
Head – UCT; Blade – Z10; Cutting Speed – 1000mm/s.

3. Clean the window

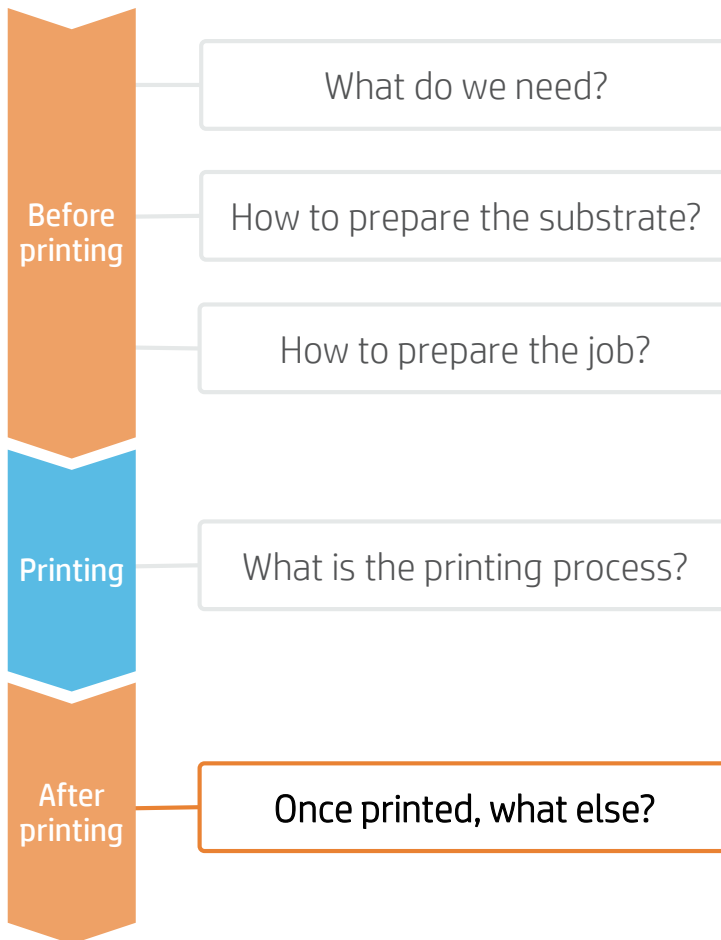
1. Having a clean window is extremely important to successfully install a film. Each dust particle present on the glass will cause a visible bubble in the film.
2. Clean the window using a specific window cleaner, or soapy water. Use a window scraper to remove adhered dust if needed.
3. Remove the water using a rubber squeegee and a lint-free cloth. Pay extra attention to any dirt on the edges of glass and frame.



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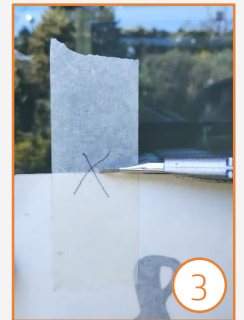


Once printed, what else?



4. Registering sign position

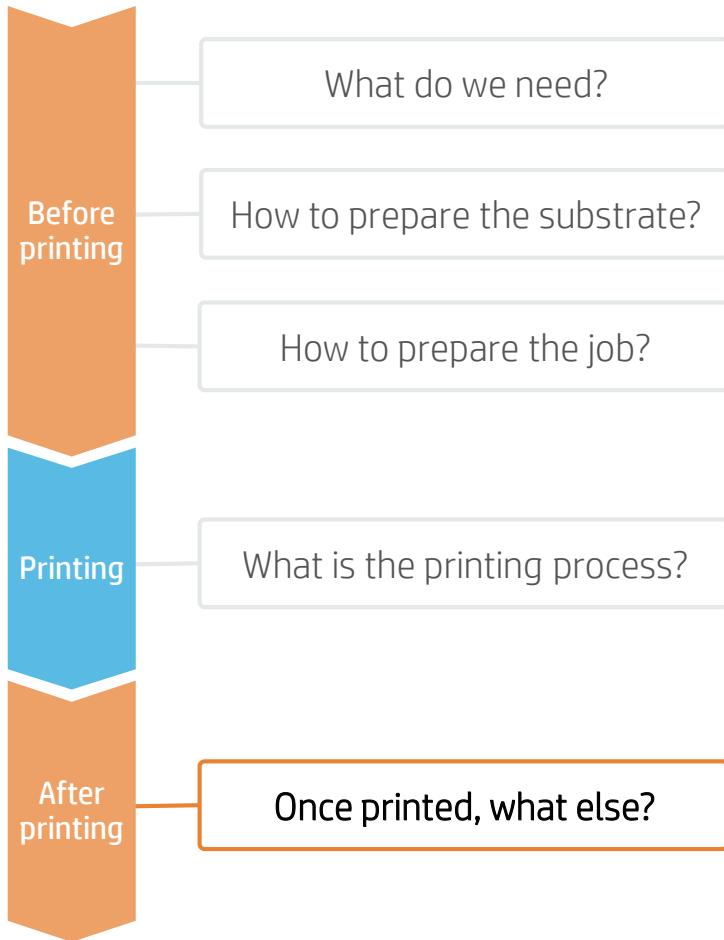
1. Place the sign on the window without removing the liner, and with the help of a bubble level place the sign in its final position.
2. Apply 2 pieces of tape to temporarily hold the sign in position.
3. Carefully cut the tape at the edge of the sign with a sharp cutter. Do not apply excessive pressure, in order not to scratch the glass.
4. The tape left on the window will be used as a reference together with the tape remaining on the sign.
5. When applying the sign, align the 2 pieces of tape to ensure it is in the correct position.



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Once printed, what else?



5. Remove liner

1. Remove the film's liner on a clean surface. When removing the liner from the printed film, static may be created and dust may adhere to the adhesive.
2. In order to prevent the dust from adhering, spray soapy water onto the exposed adhesive while the liner is being removed.



 **TIP:** To remove the liner, use 2 pieces of tape adhered to opposite sides of the sign. Place the pieces of tape on a corner and pull them apart.


6. Apply the sign

Spray water on the center of the window, trying not to wet the window edges.

Place the sign in its final position using the references previously marked. If the film adheres to the window, add more water.

With the help of a soft squeegee, remove the water by moving the squeegee from the center to the edges.



 **TIP:** Do not squeegee right to the edge of the window, as any remaining dust may adhere to the film.


7. Cut to final size

With the help of a 5-way tool or with a long squeegee, press any excess film right to the edge of the window frame.

Place the 5-way tool or the long squeegee between the cutter and the window edge.

Use the 5-way tool as a guide to cut away the excess film.

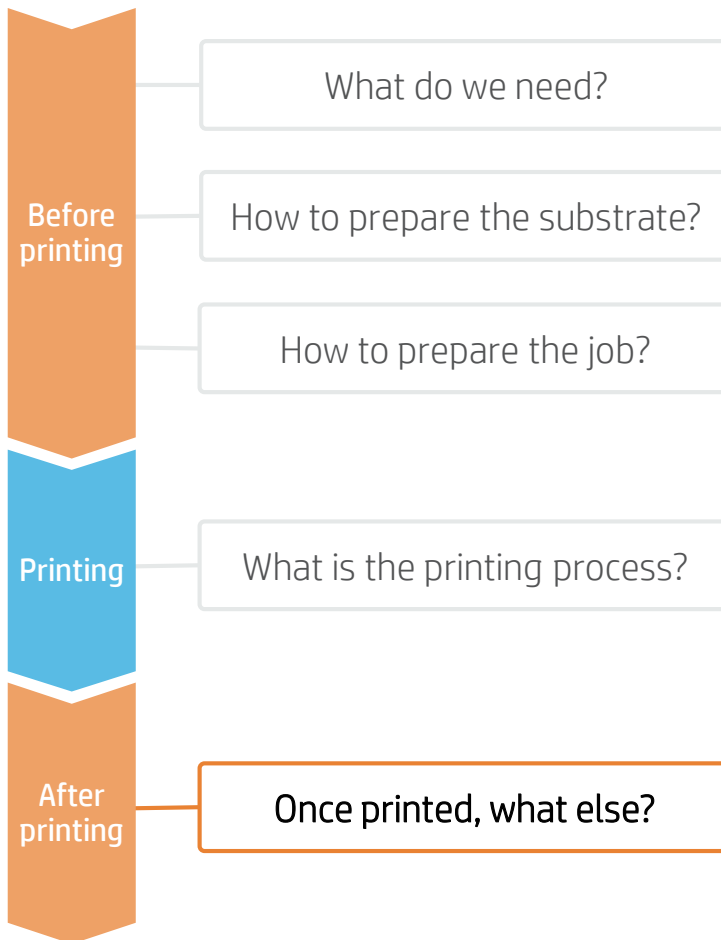


 **NOTE:** Following this step, the film will not quite touch the edge of the window, but this space will be almost unnoticeable.

How to print on clear adhesive films



Once printed, what else?



8. Re-squeegee the sign

Spray some soapy water onto the installed sign and re-squeegee it, removing any excess water that might remain between the window and the sign.



9. Cleaning

During the life of the sign, it is probable that the window and sign will need to be cleaned.

- ✓ We recommend the use of soapy water and a soft cloth.
- ✗ We do not recommend the use of aggressive alcohol-based cleaners to clean the sign.



10. Signs with multiple panels

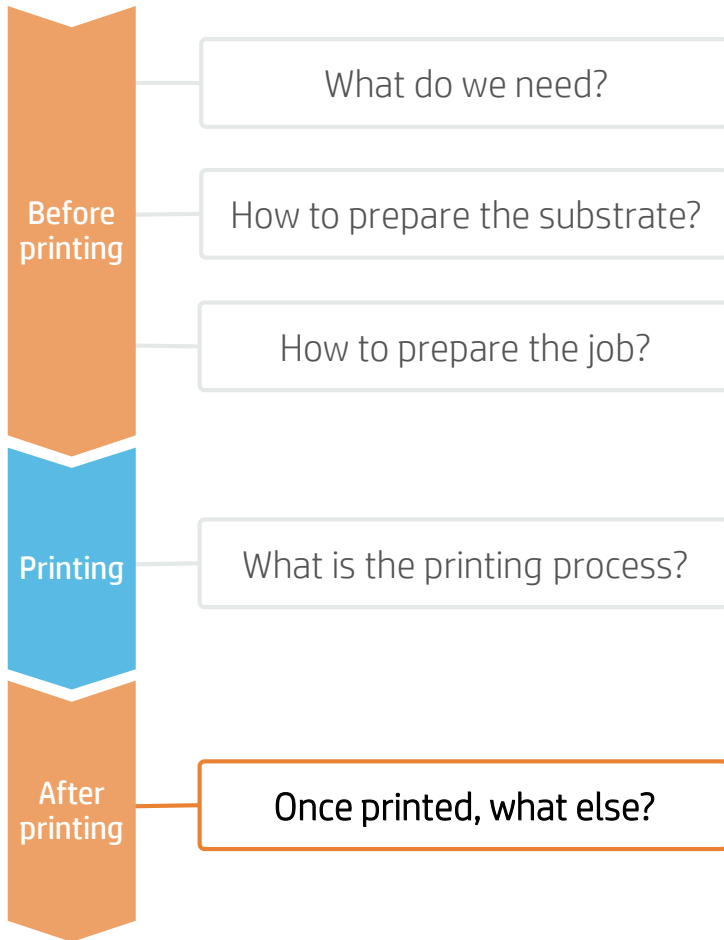
If using multiple panels, follow the same steps. Allow 2-3 cm of overlap between the different tiles that compose the complete image.



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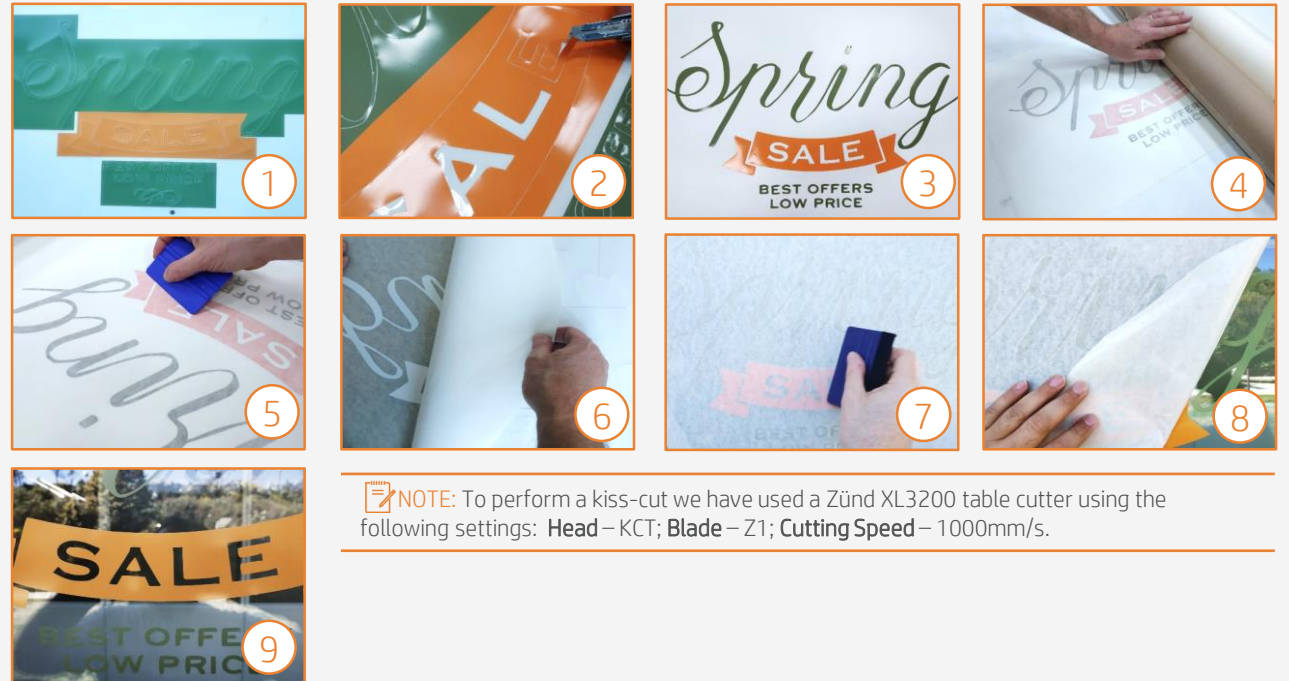
Once printed, what else?



11. Signs with multiple separate parts

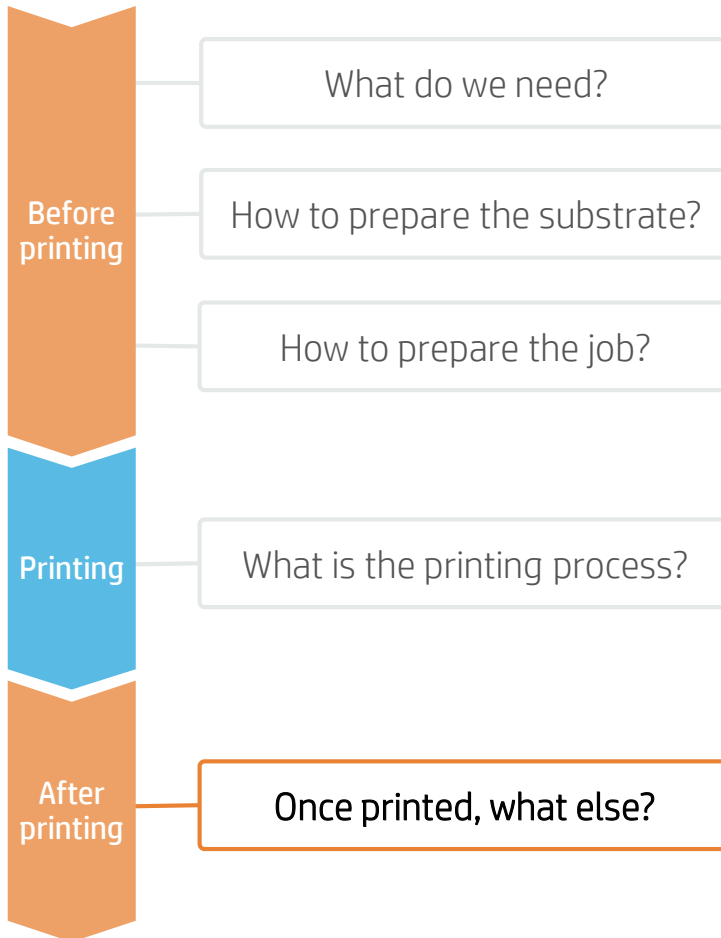
When applying signs with multiple parts that need to keep specific spaces between them, transfer tape must be used to keep the different parts in place until their positions are finalised.

After printing: kiss-cut the sign (1) and remove any excess film that won't be applied to the window (2, 3). Apply transfer tape to the remaining parts of the sign using a squeegee or a roll (4, 5). Remove the liner (6) and then apply the sign with a squeegee (7). Finally, remove the transfer tape and re-squeegee the sign (8, 9).



How to print on clear adhesive films

Once printed, what else?



12.Final result



How to print truck curtains



Learn more at:

www.hp.com/communities/lkc

Partnership:





keep reinventing