



How to print on foam boards

This document will explain how to print on foam boards, with either plastic or paper liners.



What you will need?



Foam board



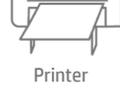
Cutting device



Clean Cloth



SW tools (RIP, edition, etc.)



Printer

Preparing the substrate



1. Substrate storage
Store the boards horizontally in a clean, cool, dust-free environment, with a temperature and humidity similar to that of the printer. Changes in temperature or humidity may cause the material to warp, especially in the case of foam boards with paper liners.



2. Substrate handling
Handle the substrates with care, we recommend using gloves to handle the boards in order not to leave fingerprints. Foam boards are susceptible to dents, and are damaged easily. Take particular care with corners and edges.



3. Substrate cutting
Cut the sample to the desired size using a cutting device (e.g., table saw or cutting table).

NOTE: This process can also be completed after printing the job.



4. Protective film removal
If the substrate has a protective film, peel it off from one side of the board.

TIP: Leave the protective film in place on the other side of the board until printing is finished or until installation of the sign.

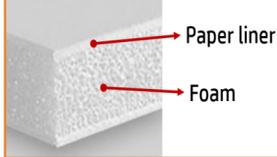


5. Board cleaning
After removing the protective film, dust particles may tend to adhere to the board, especially on foam boards with plastic liners. Clean with a lint-free cloth to remove any dust and debris.

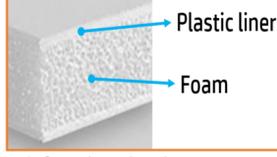
How do we prepare the job?



Depending on the surface type of the foam board being printed, select a suitable substrate preset:



Paper foam board such as: 3A Kapa and Gatorfoam, Airplac Premier and Visual, Encore White and MightyCore, Gilman Insite, Neofoam Pop-White, or equivalent products.



Plastic foam board such as: 3A Kapa plast, Gatorplast and Smart-X, Gilman Infinity, Stadur Sign SF and Easyprint, or equivalent products.

NOTE: Plastic liners and paper liners absorb ink in different ways because of differences in their porosity. Therefore, optimizer values for plastic and paper are different: plastic surfaces require values around 15%, while paper surfaces, depending on their coating type, require values from 0% to 45%.



Foam board substrate presets

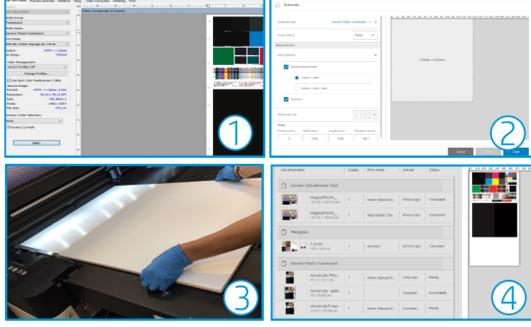
Many foam board substrates have been tested by HP. In some cases, a substrate preset has been created and is available for downloading. Visit: <https://www.printos.com/ml/#/homeMediaLocator>

HP recommends downloading and installing available substrate presets on your printer and RIP.

If there is no specific substrate preset for the substrate being used, the available "Generic Paper Foam board" or "Generic Plastic Foam board" substrate preset options may be a good starting point.

The printing process

- RIP the artwork selecting the right substrate preset and print mode for either paper or plastic foam boards and send the output to the printer queue.
- Load the substrate on the printer as Foam board > Generic Paper Foam board or Foam board > Generic Plastic Foam board (or using the specific substrate preset).
- Follow the loading process.
- Select the RIPped substrate and drag it to the printer job.



NOTE: Regarding the print mode selection:
- Select the color modes "Fast / Outdoor signage / Indoor signage" to print on white boards.

NOTE: Most foam boards are heat-sensitive. Respect the maximum curing temperatures. As a general rule, do not increase the curing temperature beyond 70°C / 158°F.

Post-print finishing



1. Substrate handling

Samples, especially thick boards, coming out from the printer may have a slight curve. Let the samples rest on a flat surface for 10–15 minutes. In most cases, the board will recover its original shape. If deformation is still noticeable after 30 minutes, consider reducing the curing temperature and print again. As a general rule, do not increase the curing temperature above 70°C / 158°F.

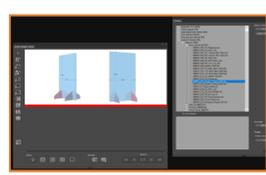
NOTE: Reducing the curing temperature may require a decrease in the amount of ink or the use of a slower print mode.



2. Cutting

Cut the sample to its final dimensions if you have not done so previously.

NOTE: HP has successfully cut different foam boards on a Zünd XL3200 table cutter using the following settings for sheets up to 17 mm thick:
- EOT Head / Z21 Blade / Cutting speed: 150 mm/s



TIP: Samples can be cut directly after printing them, as the risk of ink chipping during the cutting process is minimal.

NOTE: Predefined shapes for different applications and substrates can be found on the Zünd Design Center (ZDC) plug-in application.



3. Bending foam boards

After cutting, assemble the different parts of the display. Take care not to damage any of the edges during this process. For certain applications, it is necessary to bend the foam boards. In most cases, foam boards with plastic liners are more suited to bending, as the surface does not have a tendency to break. Foam boards with polypropylene (PP) liners can withstand multiple bends.

NOTE: V-cut is possible on certain boards that accept surface stretching.



4. Canvas with textured foam boards

One particular application that requires multiple bending is fine art reproduction on textured foam boards, such as 3A Kapatex, Encore Embossed Canvas, or Encore Mighty Core Canvas or similar.



Latex ink flexibility allows 90° bends without cracking the ink. Once the image has been printed, make the necessary V-cuts on the reverse side of the board to create the artwork structure. Also, cut any holes required to hang the artwork.

Learn more at: <https://hplatexknowledgecenter.com/>

Partnership:



