

Tips on how to print on different substrates



Designjet L25500 and Latex 260/280 printers

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Add a new substrate process

This document is provided in case you decide to make your own media preset. Normally there is no need to do this as you can find ready-made presets for all the substrates that you use.

Finding substrate presets, RIP settings and ICC profiles online

You can find 100s of substrate presets, RIP settings and ICC profiles available from the HP Media Solutions Locator at www.hp.com/go/mediasolutionslocator

The Media Solutions Locator tool assists you in locating media for your printing needs. Once you locate the media, you can view its parameters and find suppliers in your area.

HP Media Solutions Locator -- Number of records found : 2

	Media Name	Supplier	Type	Grade	Applications	Compatible Models	Region	Classif...	Weight			
	HP Double-sided HDPE Reinfor	HP	Banner	Woven PE (LDI	Double-sided	HP Latex 330	Asia Pacific Ja	HP				
	Blockout banner FR 3512-0026	Heytex Bramsche...	Banner	Blockout PVC	Double-sided	HP Latex 330	North America	Certified				

Adding a new substrate of your own

If you do not find the substrate you wish to use in the media solutions locator you can create your own substrate including printer presets, RIP settings and ICC profile suitable for your application needs using the following summarized instructions.

1. Choose the generic substrate family by referring to the table below.

The correct printer settings for your substrate may be available from your RIP vendor or substrate vendor. If not, you can start by copying printer settings from a generic or similar substrate. Substrates may be divided into the following families.

Substrate Family	Description
Self-adhesive	PVC films with adhesive on one side, which can be white-finished or transparent. The liner can be paper- or plastic-based. There are two main manufacturing processes: calendaring and casting. There are also variations such as perforated vinyl to be placed on windows. These substrates may need manual rather than automatic printhead alignment.
Banner	Usually a polyester mesh (or fabric) with PVC coating. There are also recyclable versions to cover the same applications (green banners). Banners can be frontlit or backlit.
Film	Usually a polyester film (although there are other materials such as PVC, PC, etc.) for backlit applications. They are typically translucent, although there are also transparent versions.
Fabric	Fabric medias are usually composed of polyester fibers. Some of the fabric media types come with a liner to avoid the ink trespassing the media. Fabric materials which are very stiff (such as polyester canvases) should preferably be loaded as "Photorealistic-Low temperature".
Mesh	Usually a polyester mesh covered with PVC coating with holes. Some of these substrates may have a liner and be self-adhesive.
Paper-Aqueous	Paper based (cellulose) media with or without coating or offset paper. The main difference with the billboards is that these papers are not compatible with solvent inks. Weight is usually around the 100gsm
Paper-Solvent	Paper based (cellulose) substrates with coating to allow their use in solvent printers. They usually have a limited water resistant performance.
HP Photorealistic-Low Temperature Substrate	Paper based (cellulose) media with coating (gloss and matte finishing). It has a weight higher than the other billboard and offset substrates (200gsm or higher). The main difference is its rigidity.
Synthetic Paper	Substrates manufactured using synthetic resin, mainly extruded from polypropylene (PP). They have characteristics similar to those of plastic film, but their appearance and properties are similar to regular paper made from wood pulp.

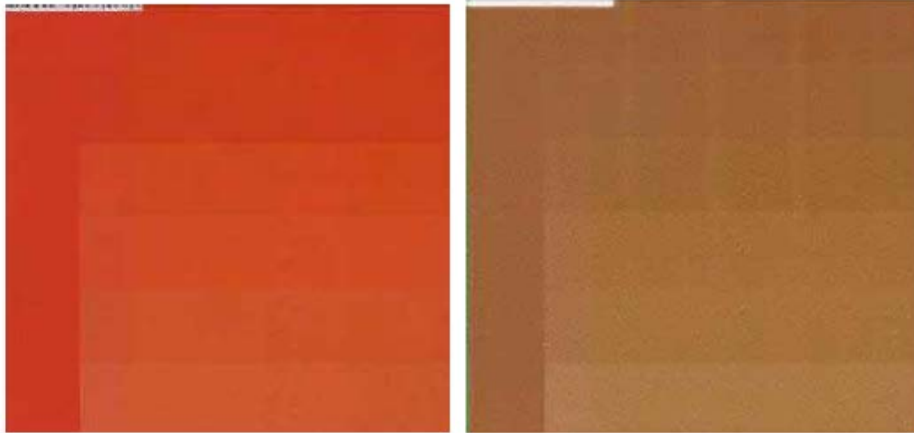
2. In your chosen RIP, create a copy or use an available media preset from the chosen substrate family
3. Select a name for the new media in case you create a copy
4. Load the new substrate into the printer
5. If the media is smaller than the printers width it's better to locate the media to the leftmost position in the spindle so it is more centered in the print zone
6. Select the generic substrate family In the printers front panel like the table above
7. Disable the substrate advance sensor (OMAS) in your RIP software if the substrate is transparent or dark, or if the printer recommends doing so during the loading process
8. Align the printheads using the front panel or EWS
9. In your RIP software, open the HP diagnostic chart, which you can obtain from the Embedded Web Server at <http://ip-addr/hp/device/webAccess/images/new.tif>, where ip-addr is the IP address of your printer
10. Select the number of print passes that you wish to create the preset for
11. Print the test chart
12. If you experience a substrate jam or notice ink smears or substrate damage while printing, refer to the **Maintenance and troubleshooting guide**
13. Check (and correct if needed) the ink quantity in the printed plot. The print may not be completely dry at this stage, this is normal and not a problem.

Look at the plot color patches and check if one or more of the patches have the right ink quantity using the guidelines below:

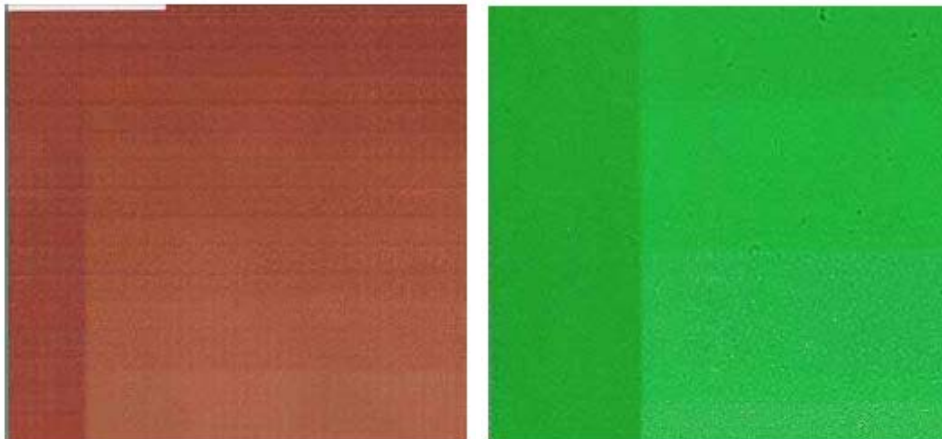
Too much ink

There are several possible symptoms of this problem

The last two or three scales of the plot look the same	Vertical bands
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Horizontal bands	Coalescence, grain
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If these symptoms appear try reducing the amount of ink in your RIP software, then reprint the chart and check again

Correct amount of ink

The patch has no defects and increasing amounts of ink result in increasing color density



Too little ink

The whole chart looks washed out



Try increasing the amount of ink in your RIP software, then reprint the chart and check again

14. After a little time, the print should be completely dry. If the ink smudges when touched, refer to the **Maintenance and troubleshooting guide**.
15. If you notice any print quality problems, refer to the **Maintenance and troubleshooting guide**.
16. When you are satisfied that the ink is drying correctly and the color saturation is acceptable for your application you should use your RIP software to color-calibrate and color-profile the new substrate using the RIP vendors user guide

Color calibration

The purpose of color calibration is to produce consistent colors with the specific printheads, inks and substrate that you are using, and in your particular environmental conditions. After color calibration, you can expect to get identical prints from your printer on different occasions.

Color calibration can be launched from your RIP software, see your RIP documentation for details.

The process consists of the following steps.

1. A calibration test chart is printed.
2. The HP Embedded Spectrophotometer (or, if you prefer, a different spectrophotometer) scans and measures the test chart.
3. The RIP uses the measurements to calculate the necessary correction factors for consistent color printing on that substrate.

Color profiles

Color calibration provides consistent colors, but consistent colors are not necessarily accurate. For instance, if your printer prints all colors as black, its colors may be consistent but they are not accurate.

In order to print accurate colors, it is necessary to convert the color values in your files to the color values that will produce the correct colors from your printer, your inks and your substrate. A color profile is a description of a printer, ink and substrate combination that contains all the information needed for these color conversions.

These color conversions are performed by your Raster Image Processor (RIP), not by the printer. For further information on the use of color profiles, see the documentation for your application software and for your RIP.

In addition to the color profiles used for printing, you may wish to calibrate and profile your monitor (display device), so that the colors you see on the screen relate more closely to those that you see on your prints.

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