Progressive, Profitable Printing

HP LATEX INK APPLICATIONS GUIDE

HP Designjet L25500 Printer

HP Scitex LX600 Printer

HP Scitex LX800 Printer

Applications for HP Latex Inks

Your guide to understanding what HP Latex Inks offer and the applications you can produce with them.

HP Latex Inks – Eliminate the trade-offs between solvent and water-based inks

Low/eco-solvent inks offer:

- Outdoor durability
- Lower cost per copy by using inexpensive and uncoated media

Water-based inks offer:

- Odorless prints[1]
- Low maintenance
- Environmental advantages

HP Latex Inks offer all of the above, and more:

Performance comparable to low/eco-solvent inks

- Durability – comparable scratch, smudge and water-resistance.[2]
- Lower cost per copy by using low-cost, uncoated media.

With the advantages of water-based inks

- Odorless prints[1] – dry and ready-to-use right out of the printer.
- Low maintenance – no daily manual cleaning of printheads.[3]
- Environmental benefits – no hazard warning labels, no HAPs[4], non-flammable and non-combustible inks[5], no special ventilation required.[6]

Proven technology

Numerous print service providers around the world are already gaining the advantages of HP Latex Ink printing. In just the first year of availability, more than 3 million m^2 (32 million ft^2) of varied kinds of large-format signage were printed using HP Latex Inks.

The following pages review some of the more popular applications that print service providers are producing today, and discuss why HP Latex Inks are a good – or even better – choice for these applications.

(1 Printers using HP Latex Inks use internal heaters to dry and cure the latex polymer film. Some substrates may have inherent odor.

(2 HP image permanence and scratch, smudge, and water resistance estimates by HP Image Permanence Lab. Outdoor display permanence tested according to SAE J2527 using HP Latex, low-solvent, and eco-solvent inks on a range of media, including HP media; in a vertical display orientation in simulated nominal outdoor display conditions for select high and low climates, including exposure to direct sunlight and water; performance may vary as environmental conditions change. Scratch, smudge, and water resistance tested using HP Latex, low-solvent, and eco-solvent inks on a wide range of media, including HP media; water resistance is comparable when printed on water-resistant substrates. Laminated display permanence for Latex/low-solvent comparison using Neschen Solvoprint Performance Clear 80 laminate; for Latex/eco-solvent comparison using GBC clear gloss 1.7 mil hot laminate. Results may vary based on specific media performance and scratch testing methodology. For more information, see **www.hp.com/go/supplies/printpermanence**. Interior in-window display ratings by HP Image Permanence Lab on a range of media including HP media. HP in-window predictions based on test data under Xenon-Arc illuminant. Calculation assumes 6000 Lux/12 hr day. Laminated display permanence for Latex/low-solvent comparison using Neschen Solvoprint Performance Clear 80 laminate; for Latex/eco-solvent comparison using GBC clear gloss 1.7 mil hot laminate. For more information, see **www.hp.com/go/supplies/printpermanence**.

(3 The printer employs fully automatic printhead testing and maintenance systems.

(4 HP Latex Inks were tested for Hazardous Air Pollutants per U.S. Environmental Protection Agency Method 311 (testing conducted in 2008) and none were detected. HAPs are air pollutants which are not covered by ambient air quality standards but which, as defined in the Clean Air Act, may present a threat of adverse human health effects or adverse environmental effects.

(5 HP water-based Latex Inks are not classified as flammable or combustible liquids under the USDOT or international transportation regulations. These materials have been tested per the Pensky-Martins Closed Cup method and the flash point is greater than 110° C.

(6 Special ventilation is not required to meet US OSHA requirements on occupational exposure to VOCs from HP Latex Inks. Special ventilation equipment installation is at the discretion of the customer—no specific HP recommendation is intended. Customers should consult state and local requirements and regulations.

HP Latex Printing Technologies

Versatile, low-maintenance printing designed with the environment in mind

When printing high-quality flexible prints, the days of being forced to choose between conflicting demands for durability, low media cost, low maintenance and environmental considerations are over. Now, with HP Latex Inks, you can print a wide range of outdoor and indoor applications that effectively balance all these demands.

HP Latex Inks are water-based inks that combine the best characteristics of low/eco-solvent inks and water-based inks. You can obtain the outdoor durability and versatility on low-cost, uncoated papers you would traditionally associate with low-solvent and eco-solvent inks, together with the odorless prints[1], low maintenance and environmental advantages you get from water-based inks.




ADVANTAGES OF HP LATEX INKS

- Create odorless prints[1] – Prints produced with HP Latex Inks are odorless, making them ideal for any location where odor is a concern. Great news for wall coverings and wall papers, which cover a large surface, and where any odor would be immediately noticeable.
- Print with HP Latex Inks on HP PVC-free Wall Paper and offer odorless indoor wall decorations that meet GREENGUARD criteria for low emitting products.[9] HP Latex Inks also meet the chemical requirements of the Nordic Ecolabel (Nordic Swan) for printing companies.

- Print on low-cost uncoated papers – With HP Latex Inks, you can print on uncoated papers, and reduce your media costs by up to 30%. Solvent printers require more expensive coated papers to achieve the same results.
- Achieve excellent image quality – Produce prints with high resolution up to 1200 dpi, wide gamut and saturated colors, suitable for both long- and short-distance viewing.

- Print on lower-cost uncoated polyester fabrics[8] – With HP Latex Inks, you can print on uncoated polyester fabrics with excellent image sharpness, and save up to 30% on substrate costs. Solvent printers require more expensive coated fabrics to achieve the same image quality results.
- Print direct to fabric – With HP Latex Inks, you can print directly onto the fabric in a simple, one step process. Dye sublimation printing requires additional dye transfer equipment, transfer paper and a more complex two step process.

- Distinguish your business – Print with a combination of HP Latex Inks and PVC-free alternative banners, and offer a compete solution designed with the environment in mind, to distinguish your business in a very competitive market.
- Outdoor prints achieve display permanence up to three years unlaminated, up to five years laminated.[2]

- Achieve excellent image quality – Produce high-resolution prints up to 1200 dpi, with dense, saturated colors that stand up to close inspection.
- Eliminate drying time – Prints are fully dried inside the printer, allowing you to deliver immediately. With water-based, solvent or Lambda technologies, you need to leave prints to fully dry before packing or mounting.
- Print on lower cost films – With HP Latex Ink prints, you can print on uncoated polyester films, with excellent image sharpness. Water-based and Lambda technologies require more expensive films.

- Laminate prints right after printing – Prints are fully dried inside the printer and can be laminated immediately. No external dryer or drying time is required, saving 24-48 hours. With no need to wait for drying, it is possible to accept urgent-turnaround and same-day jobs that can command a premium price.
- Enjoy excellent flexibility and conformability – HP Latex Inks have excellent flexibility and can stretch with the vinyl during mounting without cracking. Unlike low/eco-solvent inks, HP Latex Inks soften, rather than dissolve, the surface of the print medium, providing better long-term adhesion and elasticity. Customers tell us that HP Latex prints are easier and faster to install, and that they have saved 20% wrapping time versus solvent-printed wraps.[12]

CONSIDERATIONS

- Paneling – The HP Designjet L25500 Printer has a 5 mm (0.2 in) minimum border along each edge. To prepare wall paper prints for side-by-side matched mounting (paneling), a separate edge cutting device is required.
- HP PVC-free Wall Paper has the look and feel of professional wall paper, and without PVC. The HP solution is an easy-to-use, cost-effective solution from print to installation to removal — clean removal is covered by an HP warranty.[10]

- Synthetic papers – A limited range of synthetic papers (polypropylene-based, "PP" papers) are supported. Refer to the online Media Finder to check compatible types: **www.hp.com/go/latexmediafinder**.

- Installation location – Prints produced with HP Latex Inks are ideal for indoor use. They are also suitable for outdoor use in dry climates or when installed under cover. If water-resistance or high abrasion-resistance is required, post-processing such as liquid lamination is recommended.
- Silk fabrics – HP Latex Inks are not compatible with silk fabrics.
- Cotton fabrics – A limited range of cotton fabrics are supported. Refer to the online Media Finder to check compatibility: **www.hp.com/go/latexmediafinder**.

- HP HDPE Reinforced Banner is a 5.5 oz. banner material that offers the strength of 13 oz. vinyl. With this combination, produce tough banner displays, and at the same time lower transportation costs and reduce your raw materials consumption. Recyclable through the HP Large-format Media take-back program,[11] this material helps you—and your customers—go green.

- For best results – Refer to the online Media Finder to check compatibility: **www.hp.com/go/latexmediafinder**.

- For vehicle wrap applications, HP is the only company that offers and warrants the entire printing system.[13] The HP solution includes HP Air Release Adhesive Gloss Cast Vinyl as well as the HP Clear Gloss Cast Overlaminate and comes with the HP Performance Warranty that covers image performance, durability, and clean removal up to five years.[14] This HP printing material helps you differentiate your business and attract environmentally conscious customers.

Open your business to the advantages of **HP Latex Printing Technologies**

Gain application versatility | Print with the environment in mind
Improve productivity | Reduce costs | And more…

PRIMARY APPLICATIONS FOR HP LATEX INKS	MEDIA TYPES COMPATIBLE WITH HP LATEX INKS[7]

Wall coverings - DISCOVER A NEW MARKET OPPORTUNITY

- Increasingly integrated in building design, providing a prominent, permanent architectural element.
- Also used to convey short-term, frequently changing messages in retail spaces, public buildings, transportation stations, and other locations.
- A growing opportunity for print service providers, providing a new source of revenue.

- Self-adhesive vinyl – calendered
- Wall paper

Point of purchase (POP) posters - REDUCE COSTS WITHOUT COMPROMISING QUALITY

- One of the most common large-format printing applications, mostly used for short-term campaigns.
- Usually installed indoors, demanding high-quality printing suitable for close viewing.
- Some POP posters are also installed in outdoor environments, requiring suitable durability.

- Coated paper and photo paper – both solvent and aqueous inkjet coated
- Uncoated paper
- Self-adhesive vinyl – calendered
- Polyester film

Soft signage[8] - COMPLEMENT YOUR BUSINESS WITHOUT LOSING VERSATILITY

- Flexible advertising signage and interior decoration produced on various types of fabrics, instead of vinyl and paper media.
- Fast-expanding market due to the attractive appearance of printed fabric and its light weight, wrinkle resistance and easy handling, which facilitate storage and transportation.
- Recycling opportunities further contribute to the growing popularity of soft signage.

- Coated polyester fabric – solvent, UV-curable, eco-solvent and aqueous inkjet coated
- Uncoated polyester fabric
- Liner-backed flag, voilé and mesh fabric
- HP Scitex LX800 Printer only: unlined flag

Outdoor and event banners - DIFFERENTIATE YOUR BUSINESS

- Banners and signage for exhibitions and outdoor events.
- Extremely cost-sensitive market.
- Require good outdoor durability and crack-resistant printing on low-cost, flexible media.
- Growing print buyer concern about the environmental impact of solvent-printed vinyl banners is increasing demand for more environmentally responsible alternatives.

- Vinyl banner – frontlit, backlit, blockout
- PVC-free alternative banners – HDPE, Tyvek

Light boxes - DELIVER VIBRANT, SATURATED COLORS AT HIGH PRODUCTIVITY

- Used for bus shelters, theater displays, airport signage and high-end retail signage.
- High quality demands to support close viewing, vivid images and small text.

- Polyester film
- Polyester fabric – backlit
- Vinyl banner – backlit

Vehicle wraps and graphics - CUT TURNAROUND TIMES DRAMATICALLY

- The complete or partial covering of the outside of a vehicle with preprinted vinyl film.
- Fast-growing in popularity as they offer a high-impact, low cost-per-impression marketing tool.

- Self-adhesive vinyl – cast, calendered, perforated, transparent

Original HP media	Wall coverings	Point-of-purchase posters	Soft signage	Outdoor & event banners	Light boxes	Vehicle wraps & graphics	Photo – digital fine art	Window graphics
HP PVC-free Wall Paper	✓							
HP Permanent Gloss Adhesive Vinyl		✓						
HP Permanent Matte Adhesive Vinyl		✓						
HP White Satin Poster Paper ♻		✓			✓			
HP Photo-realistic Poster Paper ♻		✓						
HP Heavy Textile Banner ♻	✓	✓	✓	✓				
HP Wrinkle-free Flag with Liner ♻	✓	✓	✓	✓				
HP Light Textile Display Banner ♻	✓	✓	✓	✓				
HP Durable Frontlit Scrim Banner		✓		✓				
HP Outdoor Frontlit Scrim Banner		✓		✓				
HP HDPE Reinforced Banner ♻				✓				
HP DuPont™ Tyvek® Banner ♻		✓		✓				
HP Blue Back Billboard Paper		✓						
HP Air Release Adhesive Gloss Cast Vinyl						✓		
HP Clear Gloss Cast Overlaminate						✓		
HP Satin Canvas		✓					✓	
HP One-view Perforated Adhesive Window Vinyl [15]		✓				✓		✓

Choose the best HP Latex Ink printing solution for your business

HP offers a growing line of large-format printers featuring HP Latex Printing Technologies. Please consult your HP representative for guidance on choosing the right solution for your target applications, production volumes and growth goals.

HP printers that use HP Latex Inks

HP Designjet L25500 Printer

Print width: up to 152,4 cm (60 in) wide
Print speed: up to 22,8 m²/hr (245 ft²/hr)
Differentiate your business with the HP Designjet L25500 Printer and HP Latex Inks. You can do more than you could with eco-solvent or traditional water-based printing alone.

HP Scitex LX600 Printer

Print width: up to 264 cm (104 in) wide
Print speed: 157 m²/hr (1690 ft²/hr)
Increase your application versatility and win new business with the HP Scitex LX600 Printer. Produce a variety of outdoor/indoor applications at true production speed.

HP Scitex LX800 Printer

Print width: up to 320 cm (126 in) wide
Print speed: up to 177 m²/hr (1905 ft²/hr)
Delivering a unique combination of high image quality at true production speed, the HP Scitex LX800 Printer boosts productivity and enables a fast return on your investment.

Wide choice of media

HP offers an extensive range of substrates compatible with HP Latex Inks – designed together with HP Latex Inks to deliver high-quality, durable output. See the next page for the current list. For more detailed product and ordering information, see **www.hp.com/go/commercial-industrial-media**.

In addition, many third-party media manufacturers are working with HP through our Registered Latex Developer Program to offer a wide range of substrates that have been tested with HP Latex Inks.

To find out which substrates have already been tested and profiled, consult the Media Finder on the HP website. The Media Finder allows you to search for compatible media per manufacturer or application, then download the printer settings and color profile for each of the certified RIPs.

Access the Media Finder for your printer at:
www.hp.com/go/latexmediafinder

Performance warranties

HP, 3M and Avery offer performance warranties or guarantees covering use of specified media with HP Latex Inks. For more information, refer to company websites.

Registered Latex Developer | 3M | ICS Warranty

Original HP Printing Materials

The HP large-format printing materials portfolio for HP Latex Ink printers includes seven recyclable substrates(11) and a range of PVC-free alternatives.

The HP Large-format Media take-back program(11)

This free and convenient recycling program, available in the U.S and Europe, that makes it easy for you and your customers to return HP recyclable media. Simply pack up eligible printing materials. HP picks up the shipping expense and handles sorting and recycling. (11

(7 No warranty is implied. Refer to the Media Finder or perform your own tests to check the compatibility of a specific media.
(8 For best results, print soft signage applications on polyester fabric that does not stretch. Performance may vary depending on media. Please consult your media supplier for compatibility details.
(9 HP PVC-free Wall Paper printed using HP Latex Inks is listed in the GREENGUARD product listing for low emitting products and is tested to the GREENGUARD standards. This paper is not GREENGUARD Certified. The GREENGUARD Environmental Institute is an American National Standards Institute (ANSI) authorized standards developer that establishes acceptable indoor air standards for indoor products, environments, and buildings. See **www.greenguard.org**.
(10 HP PVC-free Wall Paper can be easily removed from the wall. Residual adhesive can be easily wiped clean with water and a sponge. See the HP PVC-free Wall Paper Warranty at **www.hp.com/go/HPMediaWarranties**.
(11 HP offers the HP Large-format Media take-back program in the U.S. and Europe, through which most HP recyclable signage media can be returned, availability varies. Some recyclable papers can be recycled through commonly available recycling programs. For details visit **www.hp.com/recycle**. Aside from this program, recycling opportunities for these products are currently only available in limited areas. Customers should consult local recycling resources for recycling these products.
(12 Unless otherwise noted, data is aggregated from information gathered by HP, through general research and discussions with PSPs, in June and July 2009.
(13 The HP printer is subject to the HP hardware warranty.
(14 Some warranty limitations apply. See the HP Product and Performance Warranty for HP Air Release Adhesive Gloss Cast Vinyl at **www.hp.com/go/HPMediaWarranties**.
(15 HP One-view Perforated Adhesive Window Vinyl is a 60/40 product (60% printable area and 40% open area with 1.5 mm hole diameter), therefore, it is not recommended for vehicle windows that require a higher level of visibility (50/50). Customers should consult state and local requirements and regulations for vehicle windows.

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