



HP 821, 831, 871, 881, and HP 3M 891 Latex Inks used in HP Latex HP 300, 500, 1500, and 3000 series printers

Sustainability overview—environmental labels and certificates

Helps your day	Helps you win	Helps our future
<p> Original HP Latex Ink water-based technology</p> <p>ROADMAP TO ZERO Level 1 – Zero Discharge of Hazardous Chemicals (ZDHC) ¹</p> <ul style="list-style-type: none">  No reactive monomer chemistry ²  No special ventilation ³  Ozone free  No HAPs ⁴  Odorless prints ⁵  Non-combustible Non-flammable ⁶  Nickel and heavy metal free ⁷  No special transportation, handling, storage ⁶ 	<p> GREENGUARD GOLD</p> <p>Unrestricted, full room No-wait installation or lamination ⁸</p> <ul style="list-style-type: none">  No latex-related allergy  Does not cause reaction ⁹  No reactive monomer chemistry ² <p> CE 1121 HeadPrinted Company, 200, Aliso Viejo, CA, 92615 HeadPrinted.com 100-000000000 01/10/2019</p> <p> EMISSIONS DANS L'AIR INTERIEUR A+ A B C French VOC Rated A+ (very low emission) ¹¹</p> <p> Meets ¹² AgBB criteria</p> <p> Earn LEED credits</p> <p> hp ecosolutions Trained Printing Company HP Latex Printing Technology ¹⁴</p> <p>Low emitting category ¹³</p>	<p></p> <ul style="list-style-type: none"> HP 821, 831 ink cartridges made with recycled plastic ¹⁵ 95% of materials used in printer are recyclable ¹⁵ Free ink cartridge and printhead recycling with HP Planet Partners Program ¹⁶ HP 871, 881, 3M 891 ink cartons recyclable in local cardboard streams ¹⁵ Free HP Large Format Media take-back program ¹⁷ HP paper-based prints recyclable locally ¹⁷ <p> PVC free ¹⁸</p> <p> FSC www.fsc.org FSC® C115319</p> <p> Certified papers ¹⁹</p> <p> RoHS COMPLIANT</p> <p> REACH COMPLIANT</p> <p> ENERGY STAR ²¹</p> <p> epeat ²²</p>

This document provides a description of each of the environmental labels and certificates applicable to HP 821, 831, 871, 881, and HP 3M 891 Latex Inks used in HP Latex HP 300, 500, 1500, and 3000 series printers (sometimes referred to as third-generation HP Latex)

HP Latex Ink technology delivers certifications that matter to your operators, your business, and the environment

Note: Print service providers (PSPs) must seek environmental labels and certificates with certifying bodies²³

End-to-end sustainability—a better approach

HP is recognized among the 2020 Global 100 Most Sustainable Corporations in the World, and has achieved multiple other sustainability awards year after year.²⁴ Water-based HP Latex Ink provides an alternative option to eco-solvent, solvent, UV-curable, and UV-gel ink, with a design focused on sustainable impact in the signage, decoration, and textile printing segments. With an end-to-end approach, HP continues to drive a greater sustainable impact in large-format printing with each new generation of HP Latex printing system. HP has the commitment and the scale to address current—as well as anticipated—environmental requirements, and to continue leading the change in signage printing. By working with our partners and customers to closely manage each component of the printing system (printer, inks, printheads, and media), we can design and deliver products that help provide an end-to-end large-format printing solution that's better overall:

- **Better for printing companies – Helps your day**
 - Enable a more comfortable and welcoming operation
- **Better for the end-customer, more differentiation – Helps you win**
 - Advantages to access new business
- **Better for the environment – Helps our future**
 - Aspire to a world without waste

The HP Latex printing system is designed for sustainable impact through printer and cartridge materials, ink chemistry, printer operation/print production, the print itself, print display, and product end of life. This document provides a description of each of the environmental labels and certificates applicable to third-generation HP Latex Inks.

Each environmental label and certificate may apply to specific products—in many cases in specific configurations or under specific circumstances—within the portfolio of HP Latex printers compatible with third-generation HP Latex Inks. For the most current information on environmental labels and certificates, reference the product data sheets available at hp.com/go/latex. The environmental labels and certificates highlighted in this document apply as of June 3, 2020 and are subject to change without notice.

Environmental labels:

Roadmap to Zero Level 1 – Zero Discharge of Hazardous Chemicals (ZDHC)¹ – Demonstrates that HP Latex Inks conform to or meet the standards of the ZDHC Manufacturing Restricted Substances List (ZDHC MRSL) [version 1.1](#), in an effort to reduce textile production impact on the environment. The ZDHC MRSL contains more than 100 chemical substances, such as VOCs, problematic dyes, heavy metals, phthalates, and others which are banned from intentional use during production. ZDHC is an organization dedicated to eliminating hazardous chemicals and implementing sustainable chemicals in the leather, textile, and synthetics sectors. The Roadmap to Zero Program is a multi-stakeholder organization which includes top brands, value chain affiliates, and associates, that work collaboratively to implement responsible chemical management practices. See roadmaptozero.com

UL GREENGUARD GOLD⁸ – A prominent, voluntary third-party certification issued by UL and recognized worldwide. UL GREENGUARD Gold Certification to UL 2818 demonstrates that products are certified to UL GREENGUARD standards for low chemical emissions into indoor air during product usage. This certification came about from traditionally high emitting interior decoration items, like paint, carpet, and furniture, which can negatively impact indoor air quality and release strong odors for many weeks or months after installation. UL GREENGUARD Gold Certification indicates that products—including inks, printed substrates, and the combination of both for indoor applications—contribute to healthier indoor environments by minimizing potential exposure to airborne chemicals. See ul.com/gg

There are three levels of UL GREENGUARD Gold Certification for printing ink products based on the amount of printed material that may be installed in a room. HP Latex Inks are certified at the highest level (the lowest emissions), qualified as unrestricted to wallpaper a full room:

- **Wallpaper** – unrestricted for a full decorated room 33.4 m² (360 ft²) in an office environment and 94.6 m² (1,018 ft²) in a classroom environment
 - **HP Latex Inks** – qualifies here, with an additional advantage of no-wait time needed from printing to installing or laminating
- **Decorative wall** – restricted to one wall less than 10.4 m² (112 ft²) in an office environment and less than 31.6 m² (340 ft²) in a classroom environment
- **Signage** – restricted to a small sign less than 3 m² (32 ft²) in an office environment and less than 11.9 m² (128 ft²) in a classroom environment

While some competing inks also achieve UL GREENGUARD Gold Certification, not all of them reach the highest level of unrestricted to wallpaper a full room, instead they qualify for the restricted levels to decorate only one wall of a room, or a sign in a room.

FSC-certified paper¹⁹ – The HP large format printing materials portfolio includes a wide range of FSC®-certified papers. These papers carry the Forest Stewardship Council® (FSC) Mix label, signifying that these media support the development of responsible forest management worldwide. FSC® Chain of Custody certification enables PSPs to promote finished prints as FSC® certified, allowing consumers to identify and choose products that support the development of responsible forest management worldwide. PSPs must seek certifications directly with FSC.® See fsc.org

Energy Star²¹ – A voluntary United States (US) Environmental Protection Agency (EPA) program that certifies products for superior energy efficiency. The mark is broadly recognized, and furthermore, products sold to governments in the US, Taiwan, the EU, Australia/ New Zealand, and Japan must be ENERGY STAR® certified. Select low-volume HP Latex printers are ENERGY STAR® certified. See hp.com/go/ecolabels

Environmental certificates:

CE mark EN 15102¹⁰ – An obligatory product mark for the European Market. The CE marking is intended to facilitate the free movement of goods within the European Economic Area. CE marking to wallcoverings indicates the products comply with not only Construction Products Regulation CPR 305/2011/EU, but also essential requirements of Harmonized Standard EN 15102.

Émissions dans l'air intérieur¹¹ – (French VOC rating) Mandatory labeling for decoration products in France. Provides a statement on the level of emission of volatile substances in indoor air posing health risks if inhaled—on a scale from A+ (very low emission) to C (high emission). Wall decorations printed with HP Latex Inks and HP PVC-free Durable Suede Wall Paper are rated A+ according to Émissions dans l'air intérieur. See anses.fr/en/content/labelling-building-and-decoration-products-respect-voc-emissions

AgBB criteria¹² – HP Latex Inks meet with AgBB criteria. AgBB is a health-related evaluation of building products in Germany. Prints produced with HP Latex Inks on HP PVC-free Durable Suede Wall Paper meet AgBB criteria for health-related evaluation of VOC emissions of indoor building products. See umweltbundesamt.de/sites/default/files/medien/355/dokumente/agbb_evaluation_scheme_2018.pdf

Electronic Product Environmental Assessment Tool (EPEAT)²² – A voluntary certification that provides a comprehensive environmental rating that helps identify more sustainable electronic components. Qualified products meet rigorous criteria across the complete product lifecycle—from materials restriction to packaging and air quality—in addition to the latest ENERGY STAR® standard. EPEAT registered where applicable and/or supported. Low-volume HP Latex printers are EPEAT Bronze registered. For registration status and rating by country, see epeat.net

Other sustainability programs to help PSPs to better communicate their sustainability printing efforts and create new business opportunities:²³

Earn LEED credits¹³ – USGBC's LEED program (United States Green Building Council's Leadership in Energy and Environmental Design) green building certification program recognizes best-in-class building strategies and practices. Based on low chemical emissions confirmed by UL GREENGUARD Gold Certification, prints produced on HP PVC-free Durable Smooth Wall Paper using HP Latex Inks enable LEED credits in the low emitting category. See usgbc.org/leed

HP Ecosolutions Training¹⁴ – A program for HP Latex printing technology users providing convenient web-based training to help PSPs gain knowledge and provide value to the growing number of clients looking for graphics solutions with reduced environmental impact. See hplatexknowledgecenter.com/blog/hp-ecosolutions-training

HP sustainability resources:

Material Safety Data Sheet (MSDS) – A document relating to occupational safety and health for the use of various substances and products. MSDS information may include instructions for the safe use and potential hazards associated with a particular material or product, along with spill-handling procedures, transportation classification, etc. See hp.com/go/msds

As reported in the MSDS for HP 821, 831, 871, 881, and HP 3M 891 Latex Ink printing supplies:

- **HP Latex Ink water-based technology** – HP Latex Inks contain up to 70% water. Using water-based inks eliminates exposure to high solvent concentrations, and simplifies ventilation, storage, and transportation requirements.
- **No reactive monomer chemistry²** – HP Latex Inks are substantially free of reactive monomers. HP performs the chemistry for you prior to you receiving the product. With UV and UV-gel inks, the user must manage the chemistry, that is correctly curing the acrylate monomer with UV light exposure intensity, and time. Uncured acrylates are a known skin hazard with risks of exposure during UV and UV-gel printer maintenance and cleaning or with improperly cured prints.
- **No special ventilation³** – No air filtration is required for printer setup and operation. Always refer to the site preparation guide for specific recommendations.
- **Ozone free** – No ground level ozone is generated. Ground level ozone generation is associated with the UV ink curing process when mercury UV lamps are used.
- **No HAPs⁴** – No Hazardous Air Pollutants (HAPs) present. HAPs are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects.
- **Odorless prints⁵** – Intensity and hedonic testing indicates weak and neutral odor for HP Latex Ink, while eco-solvent ink is rated as weak and slightly unpleasant, and UV ink is rated as distinct and unpleasant.
- **Non-combustible and non-flammable⁶** – HP Latex Inks have a flashpoint of greater than 110° C (230° F), while the eco-solvent ink flashpoint can be between 60° C and 70° C (140° F and 158° F).
- **Nickel and heavy metal free⁷** – HP Latex Inks do not contain; not detected in testing are: nickel, arsenic, lead, cadmium, mercury, or chromium, which have historically been found in inks in the analog signage space.

No special transportation, handling, storage⁶ – Not a concern for HP Latex Ink due to the low flashpoint. Eco-solvent ink may require special care in some countries.

Does not cause a latex-related allergic reaction⁹ – The latex polymer used in HP Latex Inks is not related to natural or synthetic latex, so it does not cause a latex-related allergic reaction.

Use of recycled plastic and recycling program – HP is committed to reducing resources by increasing use of recycled plastics, and helping our customers recycle responsibly by providing many free and convenient ways to return and/or recycle eligible used Original HP ink cartridges, printheads, and HP large format printing materials. See hp.com/go/recycle for details.

The overall attribute of recyclability is a function of many factors that vary in relevance depending on the printed application (including media substrate) and the typical recycling process. HP Latex Inks have been

designed with recyclability in mind, such as avoiding heavy metals. Prints produced with HP Latex Inks are non-hazardous and safe for disposal, and this requirement has been met for all HP Latex Inks and for specific HP large format printing materials. See HP's official [Recycling HP Latex Prints – End of Life Management Statement](#) for more information.

- **HP 821 and 831 Latex Ink Cartridges made with recycled plastic¹⁵** – HP 821 and 831 Latex Ink Cartridges contain up to 34% and 39%, respectively, recycled plastic by weight collected via the HP Planet Partners program and other sources.
- **95% of materials used in printer are recyclable¹⁵** – More than 95% recyclable materials, less than 0.1% landfill by product weight following the Waste Electrical and Electronic Equipment (WEEE) Directive.
- **Free ink cartridge and printhead recycling with the HP Planet Partners program¹⁶** – Visit hp.com/go/recycle for details as not all supplies are eligible and not all countries participate.
- **HP 871, 881, and HP 3M 891 ink cartons recyclable in local cardboard streams¹⁵** – Up to 70% by weight, the carton (cardboard) portion of used HP 871, 881, and HP 3M 891 Latex Ink Cartridges can be recycled through local municipal cardboard or mixed paper programs.
- **Free HP Large Format Media take-back program¹⁷** – A free program for business customers to return signage printed using eligible HP large format printing materials. See hp.com/promo/media/index.html for details.
- **HP paper-based prints recyclable locally¹⁷** – Printed material on HP branded paper-based substrates can be recycled through commonly available recycling programs.

PVC free¹⁸ – HP Latex Ink is PVC free. Also applicable to HP PVC-free wall papers. Chemical analysis demonstrated elemental chlorine to be at or below 200 ppm. Presence of chlorine is attributed to residual chlorine used in paper-making process, and not due to the presence of PVC. See printos.com/ml/#/medialocator

RoHS – Stands for Restriction of Hazardous Substances. RoHS, also known as Directive 2002/95/EC, originated in the European Union and restricts the use of specific hazardous materials found in electrical and electronic products (known as EEE). All applicable products in the EU market after July 1, 2006 must pass RoHS compliance. See HP's Compliance with Restriction of Hazardous Substances (RoHS) Legislation in the EU and other jurisdictions.

REACH²⁰ – Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) is a regulation of the European Union, adopted to improve the protection of human health and the environment from risks that can be posed by chemicals. Select HP large format printing materials are REACH compliant. As required by REACH, HP makes a declaration regarding substances in HP large format printing materials listed as Substances of Very High Concern (SVHC) in concentrations exceeding 0.1%. To determine the status of SVHC in HP products, see the [HP REACH Declaration published at HP Printing Products and Consumables Supplies](#).

For more HP environmental sustainability details and compliance information, visit hp.com/go/environment and hp.com/go/SCC

¹ Zero Discharge of Hazardous Chemicals. Applicable to HP Latex Inks. The ZDHC Roadmap to Zero Level 1 demonstrates that an ink conforms to or meets the standards of the ZDHC Manufacturing Restricted Substances List (ZDHC MRSL) 1.1, a list of chemical substances banned from intentional use during production. ZDHC is an organization dedicated to eliminating hazardous chemicals and implementing sustainable chemicals in the leather, textile, and synthetics sectors. The Roadmap to Zero Program is a multi-stakeholder organization which includes brands, value chain affiliates, and associates, that work collaboratively to implement responsible chemical management practices. See roadmaptozero.com.

- 2 Printing with HP Latex Inks avoids the problematic reactive monomers associated with UV printing. Acrylate monomers present in uncured UV inks and UV-gel inks can damage skin.
- 3 Applicable to HP Latex printers. No special ventilation equipment means air filtration systems are not required to meet U.S. OSHA requirements. Condensate collection systems are provided on some models. Special ventilation equipment installation is at the discretion of the customer—see the Site Preparation Guide for details. Customers should consult state and local requirements and regulations.
- 4 HP Latex Inks were tested for Hazardous Air Pollutants, as defined in the Clean Air Act, per U.S. Environmental Protection Agency Method 311 (testing conducted in 2013) and none were detected.
- 5 There is a broad set of media with very different odor profiles. Some of the media can affect the odor performance of the final print.
- 6 Water-based HP Latex Inks are not classified as flammable or combustible liquids under the USDOT or international transportation regulations. Testing per the Pensky-Martens Closed Cup method demonstrated flash point greater than 110° C (230° F).
- 7 Testing of HP Latex Ink indicates no detectable concentrations of nickel, arsenic, lead, cadmium, and chromium above 0.1 ppm. This data was determined through Microwave Digestion and ICP-MS. Mercury is not detected above 1 ppm as determined by ICP-MS semi-quantitative analysis. Heavy metals are not intentionally added ingredients. Copper is only present in the cyan ink in a bound form as copper phthalocyanine.
- 8 Applicable to HP Latex Inks. UL GREENGUARD Gold Certification to UL 2818 demonstrates that products are certified to UL's GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg or greenguard.org. Unrestricted room size—full decorated room, 33.4 m² (360 ft²) in an office environment, 94.6 m² (1,018 ft²) in a classroom environment.
- 9 The latex polymer in HP Latex Inks is not related to natural or synthetic latex, so it does not cause a latex-related allergic reaction.
- 10 Applicable to select HP large format printing materials. CE mark EN 15102 is an obligatory product mark for the European Market. The CE marking is intended to facilitate the free movement of goods within the European Economic Area. CE marking to wallcoverings indicates the products comply with not only Construction Products Regulation CPR 305/2011/EU, but also an essential requirement of Harmonized Standard EN 15102.
- 11 Émissions dans l'air intérieur. Mandatory labeling for decoration products in France. Provides a statement on the level of emission of volatile substances in indoor air posing health risks if inhaled—on a scale from A+ (very low emission) to C (high emission). HP Durable Suede Wall Paper printed with HP Latex Inks was tested by a third-party lab according to the decree no. 2011-321 of March 23, 2011 (VOC regulation) and executive decisions of May 28, 2009 and April 30, 2009 (CMR regulation) of the French Ministry of Ecology, Sustainable Development, Transport, and Housing and was rated A+. See anses.fr/en/content/labelling-building-and-decoration-products-respect-voc-emissions.
- 12 AgBB criteria. HP PVC-free Durable Suede Wall Paper printed with HP Latex Inks was tested based on the test criteria of the Scheme Health-related Evaluation of Emissions of Volatile Organic Compounds (VVOG, VOC, and SVOC) from Building Products of the Committee for Health-related Evaluation of Building Products (AgBB 2018) and meets the requirements therein. See umweltbundesamt.de/sites/default/files/medien/355/dokumente/agbb_evaluation_scheme_2018.pdf.
- 13 To obtain US LEED credits based on FSC® certification, the builder must purchase HP PVC-free Durable Smooth Wall Paper printed with HP Latex Inks from an FSC Chain of Custody certified print service provider. To obtain LEED credits based on UL GREENGUARD Gold Certification, HP PVC-free Durable Smooth Wall Paper printed with HP Latex Inks must be part of a wall system in which all components are UL GREENGUARD Gold Certified.
- 14 Program for HP Latex Printing Technology users provides convenient web-based training to help print service providers gain knowledge and provide value to the growing number of clients looking for graphics solutions with reduced environmental impact. See hplatexknowledgecenter.com/blog/hp-ecosolutions-training.
- 15 HP 821 and 831 Latex Ink Cartridges contain up to 34% and 39%, respectively, recycled plastic. HP Latex printers contain more than 95% recyclable materials and less than 0.1% landfill by product weight according to criteria set by the European Community Directive 2012/19/EU on waste electrical and electronic equipment (WEEE). With the HP 871, 881, and 3M 891 ink supplies, up to 70% of the weight of the used ink cartridge is a cardboard carton that can be recycled through local municipalities. See hp.com/go/recycle for details.
- 16 HP 821 and 831 Latex Ink Cartridges and HP 831 and 881 Latex Printheads eligible for recycling. Visit hp.com/go/recycle to see how to participate and for HP Planet Partners program availability; program may not be available in your area. Where this program is not available, and for other consumables not included in the program, consult your local waste authorities on appropriate disposal.
- 17 Most HP large format paper-based printing materials can be recycled through commonly available recycling programs, or according to region-specific practices. Some HP media are eligible for return through the free, convenient HP Large Format Media take-back program. Programs may not exist in your area. See <http://www.HPLFMedia.com/ecosolutions> for details.
- 18 HP Latex Ink is PVC-free. For HP PVC-free wall papers, chemical analysis demonstrated elemental chlorine to be at or below 200 ppm. Presence of chlorine is attributed to residual chlorine used in paper-making process, and not due to the presence of PVC.
- 19 Applicable to select HP large format printing materials. BMG trademark license code FSC®-C115319, see fsc.org. HP trademark license code FSC®-C017543, see fsc.org. Not all FSC®-certified products are available in all regions. For information about HP large format printing materials, please visit HPLFMedia.com.
- 20 Select HP large format printing materials are REACH compliant. As of the date of this document, HP REACH compliant products do not contain any of the chemicals on the EU's Candidate List for Authorization (otherwise known as Substances of Very High Concern) in concentrations exceeding 0.1%. To determine the status of SVHC in HP products, see the HP REACH Article 33 Declaration published at hp.com/hpinfo/globalcitizenship/environment/productdata/reachall-products.html.
- 21 Applicable to select HP Latex printers. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency. See energystar.gov for certification status by country.
- 22 Applicable to select HP Latex printers. EPEAT registered where applicable/supported. See epeat.net for registration status by country.
- 23 Print shops/print service providers must seek environmental labels and certificates directly with certifying bodies. HP does not imply or grant environmental labels or certificates to print shops/print service providers nor does it support individual customer processing of such certifications.
- 24 HP is recognized as a leader in environmental sustainability and social impact. 2020 Global 100 Most Sustainable Corporations in the World. Annual listing compiled by Corporate Knights, a Canadian-based media and research company. See hp.com/v2/GetDocument.aspx?docname=c06009298.

