HP 872, 882, and 886 Latex Inks:

DESIGNED FOR SUSTAINABLE IMPACT

Water-based HP Latex Inks offer many advantages across the entire product lifecycle in comparison to eco-solvent, solvent, UV-curable, and UV-gel inks.

Introduction

With every new generation of HP Latex Ink, the boundaries of innovation are pushed to drive greater sustainable impact. The HP 872, 882, and 886 Latex Inks used in the HP Latex R1000, R1000 Plus, and R2000 Plus Printers continue this trend by meeting many toy safety standards[1] and earning UL ECOLOGO® Certification.[2] HP Latex Inks provide outdoor durability and versatility across all common media types used in sign and display applications, while newly expanding into rigid and heat-sensitive substrates as well as white ink applications, to produce high-quality odorless[3] prints with reduced environmental impact.

Health and environmental performance

HP Latex Printing Technologies address health and environmental concerns across a broad range of attributes throughout the entire lifecycle of a print: from production to disposal. HP 872, 882, and 886 Latex Inks do not require any hazard warning labels in comparison to solvent and UV technologies which have several. Additionally, the water-based formulation of HP Latex Inks provides a more comfortable and welcoming print production environment without trading off performance. HP Latex Inks also allow print service providers to produce odorless[3] prints for indoor display in sensitive environments such as hospitals and schools.

These HP Latex Inks contain up to 65% water and have a flashpoint greater than 110° C (230° F), making them nonflammable and non-combustible.[4] In contrast, solvent-based inks typically have more volatile components and flashpoints around 60° C to 70° C (140° F and 158° F), and may require special transportation, handling, and storage that's not needed for HP Latex Inks.

No special ventilation is required with HP Latex Inks[5] and they contain no Hazardous Air Pollutants (HAPs).[6] Printing with HP Latex Inks avoids the problematic reactive monomer chemistry[7] and ozone generation associated with UV printing.

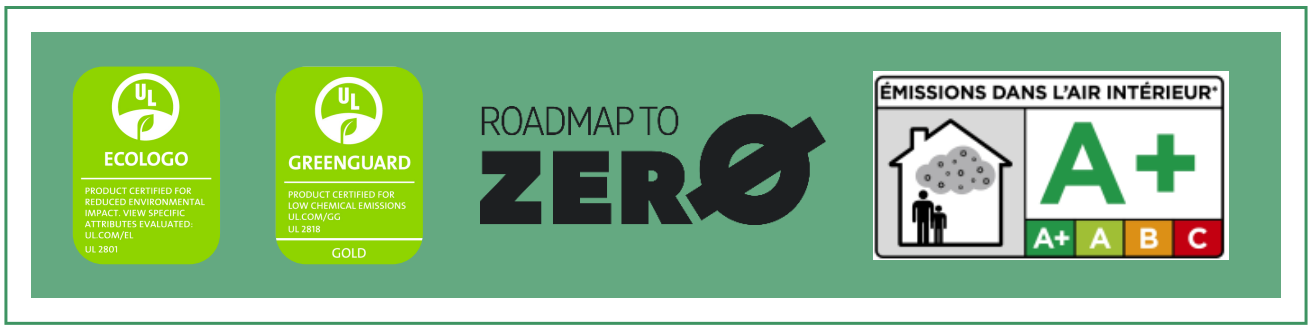
As with most cyan inks, the cyan HP Latex Ink utilizes a copper-based dye that is present in a bound form as copper phthalocyanine. There are no other heavy metals present as intentionally added ingredients in these HP Latex Inks[8] and the inks are PVC free. While it is the obligation of the toy manufacturer to adequately certify the toy for specific uses, HP Latex Inks have demonstrated compliance to toy directives in Canada, Europe, and the United States, which screen for problematic heavy metals, amines, and colorants.[1] Finally, 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.

Certifications

UL ECOLOGO® Certified[2] HP Latex Inks meet a range of stringent environmental performance standards and human health criteria and qualify for certifications that demonstrate they meet some of the world's most rigorous and comprehensive standards for low chemical emissions in indoor air for the finished print. HP is the only printing company to have UL ECOLOGO® Certified inks.[9] HP Latex Inks are also UL GREENGUARD Gold Certified at the lowest emissions, qualified for unrestricted use in wallpaper for a full room.[10] Also, no wait time is necessary before installation (or prior to applications with lamination). In addition, prints produced using HP Latex Inks on HP PVC-free Wall Paper meet AgBB criteria for health-related evaluation of VOC emissions of indoor building products.[11] These prints are rated A+ (very low-emission) according to the Émissions dans l'air intérieur statement on the level of volatile substances in indoor air.[12]

The HP large format printing materials portfolio includes a wide range of FSC®-certified papers,[13] as well as HP PVC-free Wall Paper and HP PVC-free Durable Smooth Wall Paper.[14] HP Latex Inks printed on HP PVC-free Durable Smooth Wall Paper qualify for LEED credits in the low emitting category and meet the limits for formaldehyde release in EN 15102 for wallcoverings.[15]

HP Latex Inks also conform to the Zero Discharge of Hazardous Chemicals (ZDHC) Roadmap to Zero Level 1 Manufacturing Restricted Substances List (MRSL) Version 1.1, a list of chemical substances banned from intentional use during textile production.[16]



Recyclability

HP 872, 882, and 886 Latex Inks utilize cardboard-based ink cartridges in which the exterior cardboard can be recycled through local municipalities.[17] HP 886 Latex Printheads are returnable free of charge through the HP Planet Partners program in some countries.[18] Furthermore, the HP Latex R Series printers are 99.5% recyclable at end-of-life.[19] For prints and unprinted scrap media materials, HP offers an HP Large Format Media take-back program through which many HP printed signage media can be returned. HP printed material on paper-based products can go directly to locally available recycling programs.[20]

Summary

Water-based HP Latex Inks are designed for sustainable impact throughout the product lifecycle. HP 872, 882, and 886 Latex Inks meet a variety of stringent human health criteria represented by UL ECOLOGO®[2] , UL GREENGUARD Gold,10 and ZDHC.[16] The ink cartridges comply with CE Mark, EU RoHS, EU REACH, and other applicable worldwide chemical notification requirements.[21] Finally, the HP Ecosolutions Trained Printing Company Program[22] 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.

[1] HP 872, 882, and 886 Latex Inks have been tested and demonstrated compliance to the following toy safety methods and protocols: EN 71-3, EN 71-9, ASTM F963-17, US 16 CFR 1303, US 16 CFR 1307, SOR 2011-17, and SOR 2018-83. HP does not recommend using the inks for toys intended to target children under the age of 3 years.

[2] Applicable to fourth-generation HP Latex Inks. UL ECOLOGO® Certification to UL 2801 demonstrates that an ink meets a range of multi-attribute, lifecycle-based stringent criteria related to human health and environmental considerations (see ul.com/EL).

[3] Based on sensory evaluations conducted by Odournet done according to VDI Guideline 3882 where HP 872, 882, and 886 Latex Inks were characterized as "weak" in odor intensity and "neutral" in hedonic tone. 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.

[4] 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).

[5] 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.

[6] 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.

[7] 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.

[8] Arsenic, antimony, soluble barium, cadmium, chromium, cobalt, mercury, lead, nickel, and selenium are not present as intentionally added components and were not detected in toy testing. However, according to ICP-MS results, the following may be present in the raw inks as contaminants: arsenic <0.1 ppm, chromium <0.2 ppm, nickel <0.2 ppm.

[9] UL ECOLOGO® Certification to UL 2801 demonstrates that an ink meets a range of multi-attribute, lifecycle-based criteria related to human health and environmental considerations (see www.ul.com/EL). HP is the only printing company with UL ECOLOGO® Certified inks in the "Printing Inks and Graphics Film" product category, see spot.ul.com/main-app/products/catalog/.

[10] 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. Unrestricted room size—full decorated room, 33.4 m^2 (360 ft^2) in an office environment, 94.6 m^2 (1,018 ft^2) in a classroom environment. For more information, visit ul.com/gg or greenguard.org.

[11] 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 (VVOC, 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/doku ente/agbb_evaluation_scheme_2018.pdf.

[12] 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-vocemissions.

[13] 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.

[14] 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.

[15] 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.

[16] 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.

[17] With the HP 872, 882, and 886 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.

[18] Visit hp.com/recycle to see how to participate and for HP Planet Partners program availability; program may not be available in your jurisdiction. Where this program is not available, and for other consumables not included in the program, consult your local waste authorities on appropriate disposal.

[19] HP Latex printers contain 99.5% 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).

[20] 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 HPLFMedia.com/hp/ecosolutions for details. HP large format printing materials, both unprinted and printed with Original HP Latex Inks, are non-hazardous and safe for disposal. Contact your local waste management authority for local area-specific instructions.

[21] The following countries have chemical inventory requirements and the HP 872, 882, and 886 inks can be imported without restriction: Australia (AICS), Canada (NDSL and DSL), China (IECSC), Providence of Ontario, Japan (ENCS), Korea (KECI, K-REACH), New Zealand (NZIoC), Switzerland (ChemO), Taiwan (ECSI, Taiwan REACH), United States (TSCA).

[22] 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.

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