HP Latex 881 Inks

Summary of Regulatory Compliance and Environmental Attributes

Introduction

HP 881 Latex Inks are aqueous-based ink formulations designed by HP for the large format printing industry to meet worldwide regulatory requirements and to address a broad range of health and environmental considerations throughout the entire life cycle of a print, from production to disposal.

Regulatory Summary

Chemical Inventory Status

The following countries have chemical inventory requirements under which the HP Latex 881 Inks can be imported without restriction:

- Australia (AICS)
- Canada (DSL/NDSL)
- Providence of Ontario
- China (IECSC)
- Japan (ISHL)
- Korea (KECI, K-REACH)
- New Zealand (NZIoC)
- Philippines (PICCS)
- Switzerland (ChemO)
- Taiwan (ECSI, Taiwan REACH)
- United States (TSCA)

For EU REACH, HP has completed all necessary registrations to import the HP 881 Latex Inks.

Regulated Materials

HP 881 Latex Inks **DO NOT** contain the following regulated materials:

- Arsenic, antimony, soluble barium, cadmium, chromium, cobalt, mercury, lead, nickel, and selenium as intentionally added ingredients
- Restricted azo colorants[1]
- Substances regulated as drugs and drug precursors or those requiring special permits for use
- Substances currently regulated under Annex XIV of EU REACH (authorisations) or substances currently restricted under Annex XVII of EU REACH (restrictions)

[1] *EU Directive 2002/61/EC, additionally referenced as Regulation (EC) No 1907/2006: REACH, Annex XVI (article 67), restricts the use of azo colorants that break down to aromatic amines known to cause cancer.*

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Health and Environmental Performance

Emissions

No special ventilation equipment is required with HP 881 Latex Inks.[2] Additionally, these inks do not contain Hazardous Air Pollutants (HAPs)[3]. HP 881 Latex Inks allow HP customers to produce odorless prints.

Volatile Organic Compounds (VOC) content for HP 881 Latex Inks is <300 gram/liter (by EPA Method 24). Cleaning and maintenance processes and instructions are designed for minimal VOC emissions and comply with regulations in the United States.

Human and Ecological Health

HP 881 Latex Inks are considered non-hazardous according to the Globally Harmonized System of Classification and Labeling of Chemicals (GHS, as implemented by the EU Classification, Labeling and Packing Regulation No1272/2008/EC (CLP)), US HazCom 2012, and other country-specific GHS regulations.

HP 881 Latex Inks do not contain intentionally added components in the following categories:

- Carcinogens, mutagens, or reproductive toxicants (CMRs)
- California Proposition 65 listed chemicals at concentrations requiring labeling
- Intentionally added substances identified as endocrine disruptors
- Substances considered very toxic or toxic
- Substances classified as respiratory sensitizers
- Substances identified as "very high concern" (SVHC) according to EU REACH criteria
- Substances identified as “very persistent and/or very bioaccumulative” (VPVB) according to EU REACH criteria

Transportation and Waste

HP 881 Latex Inks are non-flammable, non-combustible[4], and do not require special handling, storage, or transportation-related conditions. These formulations are not classified as Dangerous Goods in accordance with international modes of transport (IATA, IMDG, U.S. DOT, and/or ADR) and do not contain listed marine pollutants.

HP 881 Latex Inks do not contain the following substances and/or characteristics associated with hazardous waste:

[2] Special ventilation equipment (air filtration) is not required to meet U.S. OSHA requirements. 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.

[3] HP 881 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.

[4] Aqueous-based HP 881 Latex Inks are not classified as flammable or combustible liquids under the USDOT or international transportation regulations. Testing per the Pensky-Martins Closed Cup method demonstrated flash point greater than 110° C.

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- Regulated Metals[5] (as listed on page 1)
- Regulated Organics[6]
- Human health and/or ecological toxicity characteristics impacting waste profile

Specialty Applications

Schools, hospitals and living areas

HP 881 Latex Inks have been assessed for applications in schools, hospitals and other living areas and meet the emissions certification requirements of UL Greenguard Gold.
UL certification available at http://www8.hp.com/us/en/hp-information/environment/ecolabels.html

Certifications

HP 881 Latex Inks have qualified for certifications that demonstrate they meet some of the most rigorous and comprehensive indoor air quality standards for low chemical emissions.

UL ECOLOGO® Certified HP 881 Latex Inks meet a range of stringent human health criteria.[7] In addition, HP 881 Latex Inks meet the emission criteria for UL Greenguard Gold and the French government`s émission dans l'air intérieur emissions analysis.

Toys

HP 881 Latex inks have undergone required testing in support of the following safety standards for toys:

- Heavy Metal migration: No heavy metal migration was detected in the study above regulatory thresholds specified in *EN 71-3:2013+A3:2018: Migration of certain elements. Safety of Toys, ISO 8124-3:2010+A2:2018: Migration of certain elements. Safety of Toys, ASTM F963-17: Standard consumer safety specification for Toy Safety, paragraphs 4.3.5.1 (2), 4.3.5.2 (2b).*
- Phthalates: No phthalates were detected above 0.0025%. Inks are in compliance with the requirements of Phthalates content, *sections 51 and 52 according to Annex XVII of the REACH Regulation (CE) nº1907/2006 and 16 CFR part 1307 (27/10/2017 Edition).*
- Cadmium: No Cadmium was detected in the sample down to 5 ppm. Inks are in compliance with the requirements of Cadmium content, *section 23 according to Annex XVII of the REACH Regulation (CE) nº 1907/2006*
- Lead: No Lead was detected in the sample. Inks are in compliance with the requirements of Lead content, in paints and coating, *sections 16 and 17 according to Annex XVII of the REACH Regulation (CE) nº 1907/2006, ASTM F963-17: Standard consumer safety specification for Toy Safety. Paragraphs 4.3.5.1 (1), 4.3.5.2 (2a), 16 CFR 1303:2016 and CPSIA section 101.*
- Polycyclic Aromatic Hydrocarbons (PAH): No concentrations of polycyclic aromatic hydrocarbons (PAH) higher than the limit of quantification (0.1 mg/kg) have been detected in analyzed samples. No concentrations higher than 0.5 % by weight of polycyclic aromatic hydrocarbons (PAH) *limited by REACH Regulation (EC) no. 1907/2006, have*

[5] *Copper is only present in the cyan ink and is present in a bound form as copper pthalocyanine.*
[6] *Includes regulated substances present on California STLC and TTLC lists.*
[7] *UL ECOLOGO® Certification to UL 2801 demonstrates that an ink meets a range of stringent criteria related to human health and environmental considerations (see ul.com/EL).*

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been detected in the analyzed samples. Therefore, these samples meet point 50 of Annex XVII in REACH Regulation (EC) no. 1907/2006.

- Bisphenol A (BPA): No Bisphenol A was detected in the sample down to 0.1 ppm.
- Colorants: No colorant higher than the limit of quantification (2 ppm) were detected in analyzed samples, *according to EN 71-9 :2005 "Safety of toys. Organic chemical compounds. Requirements", chapter 8.5.1 of EN 71-10:2006 Standard: "Safety of toys: Organic Chemical Compounds: Sample preparation and extraction" and 5.3 of EN 71-11:2006 Standard: "Safety of toys: Organic Chemical Compounds: Methods of analysis".*
- Primary aromatic amines: No primary aromatic amines higher than the limit of quantification (1 ppm) were detected in analyzed samples, *according to EN 71-9 :2005 "Safety of toys. Organic chemical compounds. Requirements", chapter 8.5.2 of EN 71-10:2006 Standard: "Safety of toys: Organic Chemical Compounds: Sample preparation and extraction" and 5.4 of EN 71-11:2006 Standard: "Safety of toys: Organic Chemical Compounds: Methods of analysis".*

It is the responsibility of each customer to determine that its use of HP 881 Latex ink is safe and technically suitable to the customer's intended applications and consistent with the relevant regulatory requirements applicable to the customer's final product. HP's testing focused on the chemical composition of the ink and did not address physical requirements such as choking hazards. It is the responsibility of each customer to conduct their own testing to ensure that physical, mechanical, flammability, microbiological, acoustic, electrical, temperature, magnetism, and other relevant requirements for toys are met for their final product.

Because of possible changes in the relevant industry standards, FDA and EU guidance, and other legal or regulatory requirements, as well as possible changes in HP 881 Latex ink, HP cannot guarantee that the status of HP 881 Latex inks will remain unchanged.

Recyclability

All HP Latex printheads can be recycled through the HP Planet Partners Program.[8] All HP 831 printing supplies—including ink cartridges and printheads,—as well as HP 881 Latex Printheads are recyclable through the HP Planet Partners Program.[9] HP 881 Latex Inks are supplied in 5-liter ink cartridges, where approximately 70% of the weight of the used ink cartridge is a recyclable cardboard container.

HP's recycling program, HP Planet Partners Program, allows easy recycling of HP 881 and 831 ink printheads for free. Since the program began in 1991, customers have returned more than 500 million HP ink and LaserJet cartridges for recycling worldwide. HP's multi-phase "closed loop" recycling process uses cartridges returned through HP Planet Partners Program as raw material to produce new Original HP ink and LaserJet cartridges. For more information visit the HP Supplies Recycing page:

hp.com\recycle

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

[9] Visit hp.com/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.

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HP Design for Environment (DfE) Program

In 1992, HP adopted a pioneering company-wide Design for the Environment program that considers environmental impact in the design of every product and solution, from the smallest ink cartridge to large scale industrial presses.

For more information about HP's sustainability and product solutions:
www.hp.com

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