HP Brilliant B60 Ink and HP Optimizer

Environmental Attributes and Regulatory Summary

Introduction

HP Brilliant B60 Ink and HP Optimizer are water-based formulations designed by HP 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, and the HP Brilliant Ink and HP Optimizer can be imported without restriction:

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

For EU REACH, HP has completed all necessary registrations to import the HP Brilliant Ink and HP Optimizer.

Regulated Materials

HP Brilliant Ink and HP Optimizer **DO NOT** contain the following regulated materials as intentionally added components or known contaminants:

- Arsenic, antimony, soluble barium, cadmium, chromium, cobalt, mercury, lead, nickel, copper[1],[2]
- Restricted azo colorants[3]
- Substances regulated as drugs and drug precursors or those requiring special permits for use
- Substances currently regulated under Annex XIV of EU REACH (authorizations) or substances currently restricted under Annex XVII of EU REACH (restrictions)
- Phthalates, Bisphenol A, Halogenated Organic Compounds, and Asbestos

[1] *Copper is only present in the cyan ink and is present in a bound form as copper pththalocyanine.*
[2] *Metals testing is conducted with a limit of detection of 1 ppm in the ink and optimizer*
[3] *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

These inks do not contain intentionally added Hazardous Air Pollutants (HAPs). HP Brilliant Ink and HP Optimizer allow HP customers to produce odorless prints.

Volatile Organic Content (VOC) content for HP Brilliant Ink and HP Optimizer is <150 gram/liter (by EPA Method 24). VOC emissions are very low, for example when compared to typical offset lithography emissions. Additional emissions data, generated in accordance with EPA Method 25a, is available upon request. Cleaning and maintenance procedures are designed for minimal VOC emissions and comply with regulations in the United States.

Human and Ecological Health

HP Brilliant Ink and HP Optimizer do not contain intentionally added components or known contaminants in the following categories:

- Carcinogens, mutagens, or reproductive toxicants (CMRs)
- California Proposition 65 listed chemicals at concentrations requiring labeling
- 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
- Mineral oils

Transportation and Waste

HP Brilliant Ink and HP Optimizer are non-flammable, non-combustible, 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 Brilliant Ink and HP Optimizer do not contain the following substances and/or characteristics associated with hazardous waste:

- Regulated Metals: Arsenic, antimony, soluble barium, cadmium, chromium, cobalt, mercury, lead, nickel, copper[4], and selenium as intentionally added ingredients or known contaminants[5]
- Regulated Organics[6]
- Halogenated Organic Compounds
- Human health and/or ecological toxicity characteristics impacting waste profile

[4] *Copper is only present in the cyan ink and is present in a bound form as copper pththalocyanine.*
[5] *Metals testing is conducted with a limit of detection of 1 ppm in the ink and optimizer*
[6] *California regulated organics list for hazardous waste.: California Code of Regulations, Title 22, Chapter 11, Article 3.*

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Specialty Applications

Children's Books

Books, including children's books, produced using HP Brilliant Ink and HP Optimizer can be considered safe for use[7]. HP typically considers chemical compliance criteria for ink formulations in terms of EN 71-3: 2012, Specification for Migration of Certain Elements. Additionally, material-specific requirements defined in EN 71-9:2005 (Organic Chemical Compounds, Requirements) pertaining to paper and having direct relevance to children's books is also considered. HP Brilliant Ink and HP Optimizer meet obligations for adherence to the EU Toy Safety Directive, 2009/48/EC, Annex II (Particular Safety Requirements), Part III (Chemical Properties) for formulated products used in printing applications involving children's products, including but not limited to, certain types of toys.

The HP Brilliant Ink and HP Optimizer do not contain any of the 16 colorants controlled by EN 71-9, belonging to the following classes of dyestuffs: Disperse dyes, Solvent dyes, Basic dyes and Acid dyes nor do they contain any of the prohibited PAAs listed in EN71-9. Although the remaining sections of EN 71-9 include chemicals of concern for toy materials not directly relevant to printing applications (wood, leather, liquid, polymeric, etc.), the HP Brilliant Ink and HP Optimizer formulations are positioned to comply with the material restrictions included in the broader scope of EN 71-9.

In the United States, the HP Brilliant Ink and HP Optimizer do not require testing for compliance with the lead content limit because the Consumer Product Safety Commission (CPSC) determined that these materials consistently meet the CPSIA lead content limit and are, therefore, exempt from any related testing requirements. Additionally, HP confirms that the HP Brilliant Ink and HP Optimizer supplied do not contain > 0.1 ppm of lead[8].

Recyclability

All HP Brilliant Ink and HP Optimizer printheads can be recycled through the HP Planet Partners Program.[9]

HP's recycling program, HP Planet Partners, allows easy recycling of HP Brilliant Ink and HP Optimizer 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 as raw material to produce new Original HP ink and LaserJet cartridges. For more information visit the HP Supplies Recycling page:

http://intranet.hp.com/ipg/ams/ipga-marketing/Environmental-Leadership/Pages/default.aspx

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 entire data centers.

For more information about HP's social and environmental responsibility programs, see **www.hp.com/livingprogress**.

[7] *A more detailed compliance summary can be provided directly to customers upon request, "Compliance Position for HP Brilliant Ink and HP Optimizer pertaining to Printing of Children's Books."*

[8] *Compliance under the Labeling of Hazardous Art Materials Act (LHAMA) (15 U.S.C.1277) requires the submission of art material product formulations to a toxicologist for review to assess chronic adverse health effects through customary or reasonably foreseeable use. This statement in no way addresses compliance with LHAMA or other regulations outside of the CPSIA, section 1500.*

[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. 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.*

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