Original HP ink cartridges** for use with the **HP PageWide Pro 452/477 series** offer a wide variety of safety and environmental features. For this, HP considers own HP standards, requirements of mandatory regulations, and voluntary certification criteria. Main requirements are summarised in HP’s General Specification for the Environment (GSE). Accordingly, HP strongly recommends that users only apply original HP cartridges to ensure safe and sustainable operation of their HP printing system***.

**Firm precautions ensure safe products**

**EU and US classification** – HP ink mixtures used with HP PageWide Pro 452/477 series printing systems are not classified as hazardous according to the assessment criteria for mixtures in the European Union (Regulation (EC) No 1272/2008, as amended)⁴. They are neither classified nor labelled as toxic, carcinogenic, mutagenic, toxic to reproduction, sensitising or corrosive. Most HP ink mixtures are also not classified or labelled as hazardous according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)⁵ as well as applicable requirements in the United States (OSHA CFR 1910.1200, as amended).⁶ If required, HP ink cartridges might bear supplemental label information for containing particular sensitising agents in accordance with the European Union (Regulation (EC) No 1272/2008, as amended)⁷. Further safety information might be provided in the inserts of the products or on the packaging.

**REACH compliance** – HP is committed to meeting all applicable REACH requirements and providing customers with information about the chemicals in our products where required by REACH⁸ – including original HP ink cartridges for the HP PageWide Pro 452/477 series.

**RoHS conformity** – Where countries apply materials restrictions on electrical and electronic equipment to ink cartridges (such as the European Union’s RoHS Directive 2011/65/EU), HP is committed to meeting all applicable materials restrictions and documentary requirements by the relevant deadlines.
**GSE fulfilment** – Original HP ink cartridges for the HP PageWide Pro 452/477 series meet a variety of strict substances and materials restrictions according to our General Specification for the Environment (GSE). The GSE is a series of standards which defines HP’s global product environmental requirements, applies HP-wide, and contributes to our commitment to global citizenship.

**Return and recycling instead of landfill disposal**

**Design for recycling** – Parts of original HP ink cartridges for HP PageWide Pro 452/477 series printing systems greater than 25 grams in weight are marked with internationally recognised ISO symbols for ease of materials identification.

**Ink cartridge return options** – HP helps you recycle your original HP ink cartridges – it’s easy and free with the HP Planet partners programme available in more than 60 countries and territories around the world.\(^\text{(5)}\)

**Closed-loop recycling process** – Original HP ink cartridges returned through HP Planet Partners go through a multiphase recycling process and are reduced to raw materials which can then be used to make new products, including original HP ink cartridges. You can be confident that original HP ink cartridges recycled through HP Planet Partners are never refilled, resold, or sent to a landfill.\(^\text{(5)}\) More than 80% of original HP ink cartridges meanwhile contain between 45-70% recycled content.\(^\text{(6)}\)

**External proof of sound performance**

For meeting more than a hundred criteria, HP PageWide Pro 452/477 series printing systems are certified with the internationally renowned Blue Angel eco label according to DE-UZ 205 (formerly RAL-UZ 205) in Germany.\(^\text{(7)}\) This includes original HP ink cartridges and ink mixtures which are part of Blue Angel evaluation. Accordingly, these ink mixtures are required to not contain substances classified as carcinogenic, mutagenic to germ cells, or toxic to reproduction as intentionally added constituents. Also, they are required to not contain azo dyes that can release carcinogenic aromatic amines according to REACH Regulation\(^\text{(8)}\), while cobalt and nickel oxides content has to be as low as reasonably achievable.\(^\text{(9)}\) Biocides are required to be generally checked for strict compliance: only biocides may be used for which an active substance dossier for preservatives for products during storage (product type 6) according to EU Regulation\(^\text{(10)}\) has been submitted.\(^\text{(7)}\)

The HP PageWide Pro 452dw Printer and the HP PageWide Pro 477dw MFP are certified with the Blue Angel eco label according to DE-UZ 205 in Germany.

Please note that there is no Blue Angel certification for refilled and remanufactured ink cartridges. Accordingly, it is only the operation with original HP ink cartridges for which HP can ensure that a certified HP Officejet or HP PageWide printing system offers Blue Angel performance.

**Stringent requirements for suppliers and manufacturing**

HP inks for the HP PageWide Pro 452/477 series are manufactured following precisely defined formulations using only raw materials from carefully chosen and contracted suppliers in order to achieve high product quality. Manufacturing is conducted in production sites that are ISO certified (ISO 14001, environmental management system) and that include worldwide accepted ISO requirements in the quality management system (ISO 9001:2000, quality assurance in production) or an equivalent programme.
Respective suppliers are committed to comply with our high safety and environmental GSE standards (see above). HP’s verification process to prevent the use of non-compliant material in the products is based on our risk analysis of restricted substances entering the supply chain and includes technical documentation outlined in the European Union’s EN 50581:2012 standard.

**Check for potential substances release**

When original HP ink cartridges are used as intended to operate HP PageWide Pro 452/477 series printing systems, emissions testing assessment shows compliance with relevant occupational and indoor air requirements. In addition, for HP PageWide Pro 452/477 series printing systems, HP can confirm compliance with the strict criteria for substances release of the German Blue Angel eco label. In detail, this includes potential release of TVOCs, benzene, styrene and unidentified VOCs.

**Don’t compromise on safety and the environment**

If users want to be sure to get the safety and environmental performance outlined above, HP recommends operating the HP PageWide Pro 452/477 series with original HP ink cartridges only.

Alternative non-HP products might significantly alter the behaviour of your HP printer. To ensure users can consider relevant safety and environmental aspects at any time, HP makes information on relevant assessment of original HP ink cartridges readily available.

**Further details if you want to know more**

In-depth information on your particular original HP ink cartridges for HP PageWide Pro 452/477 series printing systems is listed in the following Safety Data Sheets (SDS) which are available on the HP website:

- SDS for HP ink cartridge HP 913A black – no. L0R95SERIES
- SDS for HP ink cartridge HP 913A cyan – no. F6T77SERIES
- SDS for HP ink cartridge HP 913A yellow – no. F6T79SERIES
- SDS for HP ink cartridge HP 913A magenta – no. F6T78SERIES

For HP PageWide Pro 452/477 series printing systems certified with the Blue Angel eco label in Germany, Blue Angel user information documents also provide further details on the particular printing systems’ environmental performance when operated with original HP ink cartridges. The documents can be accessed on the Blue Angel User Information documents subpage on the HP website, the Blue Angel website or by clicking the following links:

- Blue Angel user information for HP PageWide Pro 452dw Printer
- Blue Angel user information for HP PageWide Pro 477dw MFP

More information on the Blue Angel and certified HP products is available on the Blue Angel section of the HP website.

* The listed HP ink cartridges comprise a selection from the region Europe, the Middle East, and Africa (EMEA). It might not be exhaustive.

** This series includes the following models: HP PageWide Pro 452dw Printer, HP PageWide Pro 477dw MFP. Please note that there are HP printing systems which are available in certain geographies and/or for certain customer segments only.

*** HP printing systems comprise printer, print media, and original HP cartridges.

**** The compilation of the listed SDSs is not exhaustive and selected based on the following settings from the HP website: Germany/English (country/language).
Supporting references:


[6] More than 80% of original HP ink cartridges contain between 45–70% recycled content. 100% of original HP toner cartridges contain between 5–38% post-consumer or post-industrial recycled content. Does not include toner bottles. See www.hp.com/go/recycledcontent for list.


[9] Substances are classified according to the Blue Angel award criteria as specified in footnote 7.


[12] ISO/IEC 28360:2015 is a standard measurement procedure for determining substance and particle release from information and communication technology and consumer electronics equipment. The ISO standard defines the internationally recognised test methodology for measuring printers’ contribution of substances and particles to indoor air and requires testing under high-use operating conditions.