

## Brief

# Indoor air quality matters

## How Original HP LaserJet cartridges make a difference



### Did you know...

- HP consistently considers and tests the whole HP LaserJet printing system for sustainable and safe performance. Under operating conditions and including printer, toner cartridge, and paper.
- Contributions of LaserJet printing systems using Original HP toner cartridges to indoor air substance and particles concentrations are far below relevant guidelines.
- Emissions of HP LaserJet printing systems—using Original HP toner cartridges—are far below mandatory occupational exposure limit values.
- HP LaserJet printing systems are tested by competent, independent labs before market entry for relevant emissions.

In addition to high operating performance and product reliability, many organizations are including indoor air quality (IAQ) considerations as an essential factor in their imaging and printing purchase decisions. HP puts forth significant effort to optimize the IAQ performance of HP LaserJet printing systems—printer, toner cartridges, and paper—to meet a high level of safety in a variety of indoor environments.

### Choose HP printing systems to meet IAQ expectations

Original HP toner cartridges—when tested together with HP printers and HP paper—meet or exceed substances and particles emissions criteria established by specific eco-labels like Blue Angel and EPEAT.<sup>1,2</sup> Replacing the Original HP toner cartridge with a remanufactured cartridge could significantly alter the printing system's emissions behaviour. Accordingly, compliance with such labels as well as resulting indoor air quality performance might be impacted.

### Rely on products designed for the environment

Numerous HP LaserJet printing systems carry internationally recognized eco-labels not just for their substance and particles emissions performance, but also because of their low noise generation and energy consumption, materials used, and recyclable design. These factors are part of HP's Design for Environment program, established in 1992. Original HP toner cartridges are part of this program, and offer the following benefits to organizations:

- Original HP toner cartridges deliver superior print quality and consistent results, resulting in less paper waste and reduced environmental impact compared with remanufactured cartridges.<sup>3</sup>
- 100% of Original HP toner cartridges are manufactured with recycled material.<sup>4</sup>
- Responsibly recycled—return Original HP toner cartridges to the HP Planet Partners recycling program. It offers recycling at no additional cost and is available in more than 60 countries, territories, and regions worldwide.<sup>5</sup> No Original HP toner cartridges returned through HP Planet Partners are ever sent to a landfill, and HP never refills or resells them.

## Safe and sound performance

### HP LaserJet printing systems are far below the following mandatory and voluntary requirements and guidelines

#### Mandatory occupational exposure limit values

- U.S. Permissible Exposure Limits<sup>6</sup>
- EU Indicative and Binding Occupational Exposure Limit Values<sup>7</sup>
- German Occupational Exposure Limit Values<sup>8</sup>
- Australian National Exposure Standards<sup>9</sup>
- Singapore Occupational Exposure Levels of Toxic Substances<sup>10</sup>

#### General IAQ guidelines

- Californian Chronic Reference Exposure Levels<sup>11</sup>
- U.S. Reference Concentration for Chronic Inhalation Exposure<sup>12</sup>
- WHO Indoor Air Quality Guidelines<sup>13</sup>
- German Guide values for Indoor Air<sup>14</sup>

#### Voluntary eco-labels

- Blue Angel in Germany<sup>1</sup>
- EPEAT in the U.S., Canada, and Australia<sup>2</sup>
- EcoLogo in Canada<sup>15</sup>
- Nordic Ecolabel in Scandinavia<sup>16</sup>
- EcoMark in Japan<sup>17</sup>

#### Learn more at

[hp.com/go/enviroprintdesign](http://hp.com/go/enviroprintdesign)

<sup>1</sup> The Blue Angel criteria for printers, copiers, and multifunction devices (RAL-UZ 122) of the German Federal Environmental Agency are in effect as of 2007 and were valid until the end of December 2013. Since January 2013, the RAL-UZ 171 is in effect including a new particle number guide value for laser printers which supplements the established weight-based fine dust guide value of the Blue Angel.

<sup>2</sup> Electronic Product Environmental Assessment Tool (EPEAT), managed by the Green Electronics Council of the International Sustainability Development Foundation (ISDF). For printing systems, the IEEE Standard for Environmental Assessment of Imaging Equipment (IEEE Std 1680.2-2012) is applied.

<sup>3</sup> 2014 Four Elements Consulting LCA study, commissioned by HP, compared Original HP 05A and 85A monochrome toner cartridges with a sample of remanufactured alternatives across eight environmental impact categories. For more, visit [hp.com/go/NA-LJLCA](http://hp.com/go/NA-LJLCA). The LCA leverages a SpencerLab 2013 Reliability study, commissioned by HP, where Original HP toner cartridges were compared with nine remanufactured brands sold in North America. For details, see [spencerlab.com/reports/HP-Reliability-NA-RM-2013.pdf](http://spencerlab.com/reports/HP-Reliability-NA-RM-2013.pdf).

<sup>4</sup> According to the HP Planet Partners Program, October 2016.

<sup>5</sup> Program availability varies, see HP 2015 Sustainability Report.

<sup>6</sup> U.S. Occupational Safety and Health Administration (OSHA), PELs-TWA, 29 CFR 1910. 1000-1/Z-2, 20016.

<sup>7</sup> European Commission, Binding Occupational Exposure Limit Values (BOELV), EU Directive 2004/37/EC.

<sup>8</sup> The revised German Ordinance of Hazardous Substances (GefStoffV) defines the workplace limits (AGW). AGWs are stated in the TRGS 900, 2006, as amended.

<sup>9</sup> Australian National Occupational Health and Safety Commission (NOHSC), National Exposure Standards (NES), NOHSC:1003, 1995/2005.

<sup>10</sup> Singapore Occupational Exposure levels of Toxic Substances, Workplace Safety and Health (General Provisions) 2006 (S 134 2006), as amended.

<sup>11</sup> Office of Environmental Health Hazard Assessment (OEHHA), California, Chronic Reference Exposure Levels (CREL), February 2005.

<sup>12</sup> U.S. Environmental Protection Agency (U.S. EPA), Reference Concentration for Chronic Inhalation Exposure (RfC), 2005.

<sup>13</sup> World Health Organization (WHO), Air Quality Guidelines for Europe, 2nd edition, 2000.

<sup>14</sup> German Federal Environmental Agency (UBA), Guide values for indoor air, 2005.

<sup>15</sup> The EcoLogo Program, founded by the Government of Canada, Type I eco-label, as defined by the International Organization for Standardization (ISO).

<sup>16</sup> Nordic Ecolabelling of imaging equipment, version 5.4. The Nordic Ecolabel or Nordic Swan is the official sustainability eco-label for the Nordic countries, introduced by the Nordic Council of Ministers.

<sup>17</sup> EcoMark, Japan Environment Association (JEA), printers criteria, version 2.11.

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