

HP Product Material Content Information



June 2018

HP actively identifies the materials and chemicals used in products, packaging, and manufacturing processes. We provide this information to customers, workers, communities, and other stakeholders so they can make informed decisions and reduce their own environmental impacts, subject to the need to protect confidential information for legitimate business needs and innovation. This document contains material content information for typical HP personal systems and printer products. Additional material content information can be found on the [HP Eco Declaration website](#), which includes REACH and IT-Eco declarations.

HP aspires to a world where our products and operations use materials and chemicals that cause no harm. The [HP materials and chemical management policy](#) guides how we specify materials and chemicals for use in products, packaging, and manufacturing processes. For more than two decades, HP has worked to shift the electronics industry away from chemicals of concern to less hazardous alternatives, see the [HP Green chemistry timeline](#) for more details. Our complete list of substance restrictions can be found in the [HP General Specification for the Environment](#).

Notebook Material Content

A typical notebook PC contains more than 115 substances, many in very small amounts. The table and chart below illustrate the greatest mass substances in a typical notebook PC comprising a cumulative concentration of nearly 99%¹. Each remaining substance comprises less than 0.1% by weight of the product.

¹ Graphic is based on literature research, component based studies, substance disclosure data from HP's suppliers, and test data. Weight and component composition is representative of a typical notebook PC (with a hard disk drive) of approximately 2 kg. This analysis does not include external components, such as the power supply and power cord. Power cords contain about 70% PVC and 30% Copper (PVC includes the PVC polymer, fillers and plasticizers). We have reduced PVC usage by shortening power cords and we offer PVC-free power cords that use thermoplastic elastomers in many countries worldwide, depending on the product. Data do not add up to 100% due to rounding.

Notebook Material Content



- PC/ABS
- Steel
- Copper (Cu)
- Aluminum (Al)
- Lithium Cobalt Oxide (LiCoO₂)
- Borosilicate Glass
- PET/PBT
- Carbon (C)
- Printed Circuit Board Epoxy
- Other Organic Solvents
- Polyethylene (PE)
- Silica (SiO₂)
- Acrylonitrile Butadiene Styrene (ABS)
- Iron (Fe)
- Polybutylene Terephthalate (PBT)
- Nickel (Ni)
- Flame Retardants
- Low-level Additions (<1%)*

Substance	% Mass
Polycarbonate (PC) / Acrylonitrile Butadiene Styrene (ABS)	24.5%
Steel	9.2%
Copper (Cu)	8.1%
Aluminum (Al)	7.8%
Lithium Cobalt Oxide (LiCoO ₂)	6.9%
Borosilicate Glass	6.9%
Polyethylene Terephthalate (PET) / Polybutylene Terephthalate (PBT)	4.9%
Carbon (C)	3.1%
Printed Circuit Board Epoxy	3.0%
Other Organic Solvents	2.7%
Polyethylene (PE)	2.6%
Silica (SiO ₂)	2.3%
Acrylonitrile Butadiene Styrene (ABS)	1.9%
Iron (Fe)	1.8%
Polybutylene Terephthalate (PBT)	1.8%
Nickel (Ni)	1.2%
Flame Retardants ²	1.0%
Low-level Additions (<1%)*	10.2%

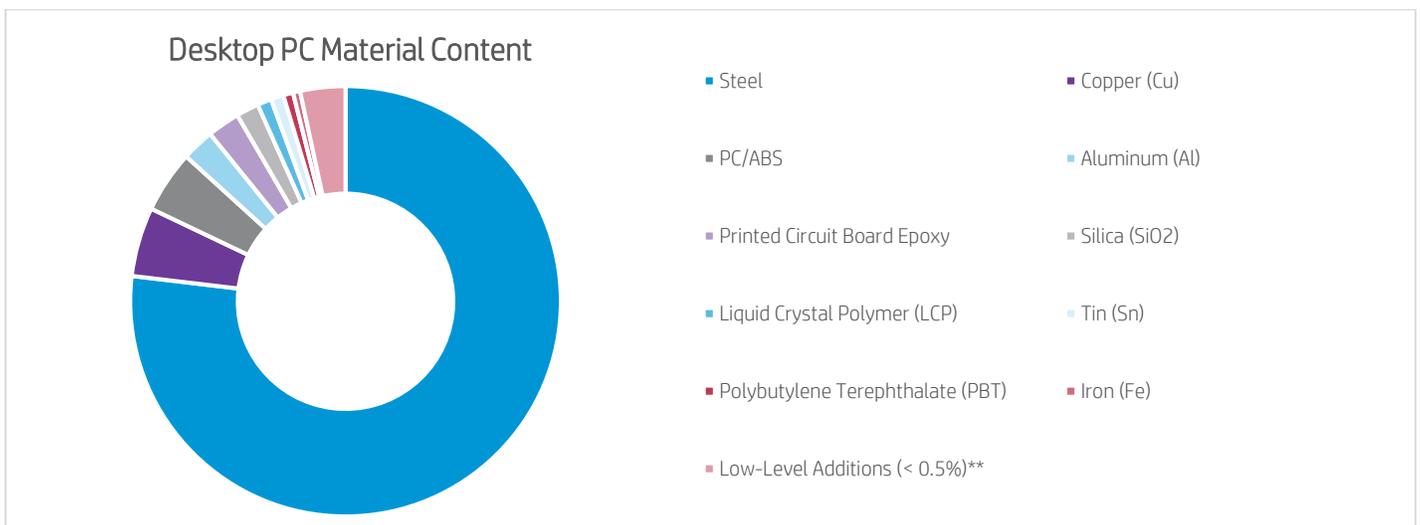
*Included in low-level additions are the following substances. Not listed are substances that comprise less than 0.1% by weight of the product:

² 75% of personal systems product groups sold in 2016 were classified as low halogen, including all HP Elite Desktops, All-in-Ones, notebooks, thin clients, and workstations.

Substance	% Mass
Zinc (Zn)	0.9%
Poly(methyl Methacrylate) (PMMA)	0.8%
Aluminum Oxide (Al ₂ O ₃)	0.7%
Tin (Sn)	0.6%
Polyvinylidene Fluoride (PVDF)	0.6%
Cellulose Triacetate (TAC) film	0.6%
Rubber	0.6%
Polycyclohexylenedimethylene Terephthalate (PCT)	0.5%
Polyphenylene Sulfide (PPS)	0.4%
Calcium Oxide (CaO)	0.4%
Liquid Crystal Polymer (LCP)	0.4%
Lithium Hexafluorophosphate (LiPF ₆)	0.4%
Polypropylene (PP)	0.3%
Silicon (Si)	0.3%
Epoxy	0.3%
Chromium (Cr)	0.2%
Polyimide (PI)	0.2%
Copper Beryllium (Cu-0.7Be) ³	0.2%
Magnesium Oxide (MgO)	0.2%
Barium Titanate (BaTiO ₃)	0.2%
Cerium Oxide (CeO ₂)	0.1%
Polyamides (PA)	0.1%
Boron Trioxide (B ₂ O ₃)	0.1%
Polyvinyl Alcohol (PVA)	0.1%
Solder Mask	0.1%

Desktop PC Material Content

A typical desktop PC contains more than 120 substances, many in very small amounts. The table and chart below illustrate the greatest mass substances in a typical desktop PC comprising a cumulative concentration of nearly 96%⁴. Each remaining substance comprises less than 0.1% by weight of the product.



³ Beryllium is restricted in the HP General Specification for the Environment with a threshold limit of 1000ppm with the exemption of ceramics in electronic components and electrical bonding applications of beryllium copper, such as connectors, springs, or EMI gaskets.

⁴ Graphic is based on literature research, component based studies, substance disclosure data from HP's suppliers, and test data. Weight and component composition is representative of a typical tower desktop PC of approximately 18 kg. This analysis does not include external components, such as the keyboard, mouse, and power cord. Power cords contain about 70% PVC and 30% Copper (PVC includes the PVC polymer, fillers and plasticizers). We have reduced PVC usage by shortening power cords and we offer PVC-free power cords that use thermoplastic elastomers in many countries worldwide, depending on the product. Data do not add up to 100% due to rounding.

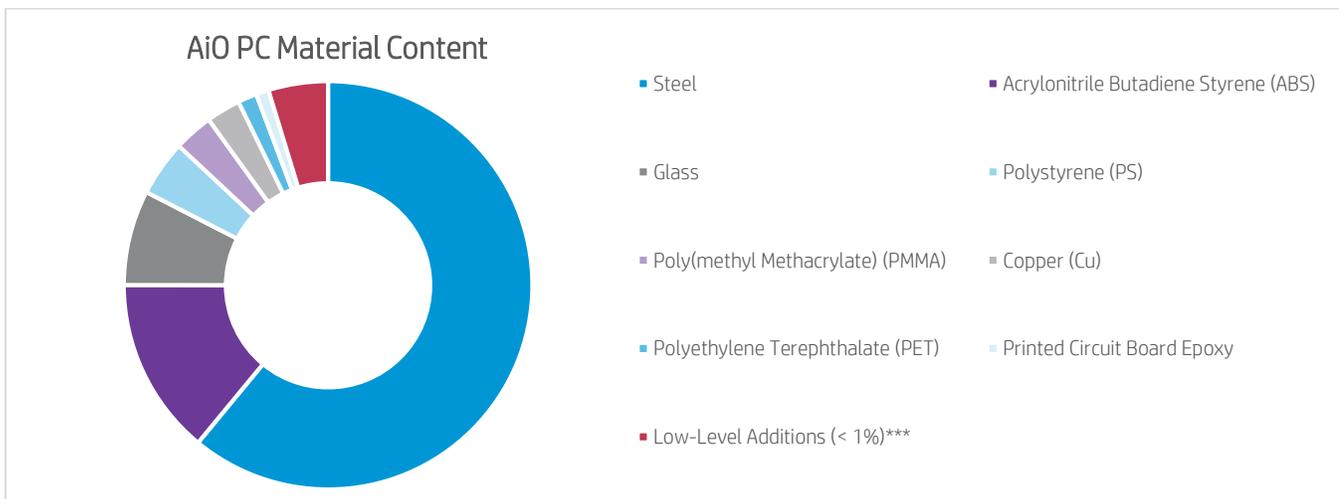
Substance	% Mass
Steel	72.5%
Copper (Cu)	4.9%
Polycarbonate (PC) / Acrylonitrile Butadiene Styrene (ABS)	4.4%
Aluminum (Al)	2.3%
Printed Circuit Board Epoxy	2.3%
Silica (SiO ₂)	1.6%
Liquid Crystal Polymer (LCP)	1.0%
Tin (Sn)	0.9%
Polybutylene Terephthalate (PBT)	0.7%
Iron (Fe)	0.5%
Low-Level Additions (< 0.5%)**	3.2%

**Included in low-level additions are the following substances. Not listed are substances that comprise less than 0.1% by weight of the product:

Substance	% Mass
Polyethylene Terephthalate (PET) / Polybutylene Terephthalate (PBT)	0.4%
Copper Beryllium (Cu-0.7Be) ⁵	0.3%
Calcium Oxide (CaO)	0.3%
Aluminum Oxide (Al ₂ O ₃)	0.2%
Polyamides (PA)	0.2%
Flame Retardants ⁶	0.2%
Polyethylene (PE)	0.2%
Nickel (Ni)	0.2%
Epoxy	0.2%
Solder Mask	0.1%
Boron Trioxide (B ₂ O ₃)	0.1%

All-in-One (AiO) PC Material Content

A typical AiO PC contains more than 120 substances, many in very small amounts. The table and chart below illustrate the greatest mass substances in a typical AiO PC comprising a cumulative concentration of nearly 99%⁷. Each remaining substance comprises less than 0.1% by weight of the product.



⁵ Beryllium is restricted in the HP General Specification for the Environment with a threshold limit of 1000ppm with the exemption of ceramics in electronic components and electrical bonding applications of beryllium copper, such as connectors, springs, or EMI gaskets.

⁶ 75% of personal systems product groups sold in 2016 were classified as low halogen, including all HP Elite Desktops, All-in-Ones, notebooks, thin clients, and workstations.

⁷ Graphic is based on literature research, component based studies, substance disclosure data from HP's suppliers, and test data. Weight and component composition is representative of a typical All-in-One PC of approximately 9 kg. This analysis does not include external components, such as the keyboard, mouse, and power cord. Power cords contain about 70% PVC and 30% Copper (PVC includes the PVC polymer, fillers and plasticizers). We have reduced PVC usage by shortening power cords and we offer PVC-free power cords that use thermoplastic elastomers in many countries worldwide, depending on the product. Data do not add up to 100% due to rounding.

Substance	% Mass
Steel	60.8%
Acrylonitrile Butadiene Styrene (ABS)	14.0%
Glass	7.5%
Polystyrene (PS)	4.4%
Poly(methyl Methacrylate) (PMMA)	3.1%
Copper (Cu)	2.7%
Polyethylene Terephthalate (PET)	1.5%
Printed Circuit Board Epoxy	1.0%
Low-Level Additions (< 1%)***	4.7%

***Included in low-level additions are the following substances. Not listed are substances that comprise less than 0.1% by weight of the product:

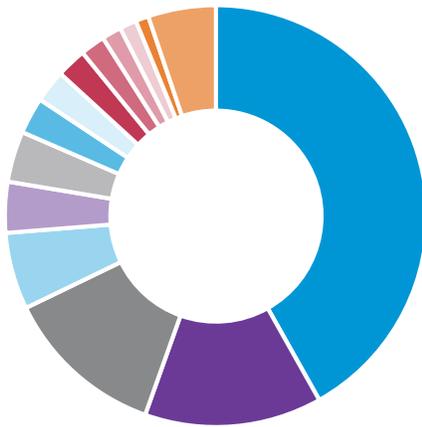
Substance	% Mass
Polybutylene Terephthalate (PBT)	0.66%
Aluminum (Al)	0.52%
Polyoxymethylene (POM)	0.41%
Ethylene Vinyl Acetate (EVA)	0.34%
Polycarbonate (PC)	0.31%
Polycarbonate (PC) / Acrylonitrile Butadiene Styrene (ABS)	0.26%
Tin (Sn)	0.20%
Polyethylene (PE)	0.19%
Polydimethylsiloxane (PDMS)	0.16%
Aluminum Oxide (Al ₂ O ₃)	0.13%
Flame Retardants	0.13%
Calcium Oxide (CaO)	0.12%
Iron Oxide (Fe ₂ O ₃)	0.12%
Polyphenylene Ether (PPE)	0.09%
Rubber	0.08%

Display Material Content

A typical display contains more than 90 substances, many in very small amounts. The table and chart below illustrate the greatest mass substances in a typical display comprising a cumulative concentration of nearly 99%⁸. Each remaining substance comprises less than 0.1% by weight of the product.

⁸ Graphic is based on literature research, component based studies, substance disclosure data from HP's suppliers, and test data. Weight and component composition is representative of a typical flat panel display of approximately 5.5 kg. This analysis does not include external components, such as the power cord. Power cords contain about 70% PVC and 30% Copper (PVC includes the PVC polymer, fillers and plasticizers). We have reduced PVC usage by shortening power cords and we offer PVC-free power cords that use thermoplastic elastomers in many countries worldwide, depending on the product. Data do not add up to 100% due to rounding.

Display Material Content



- Steel
- Polycarbonate (PC)
- Silica (SiO₂)
- PET/PBT
- Iron (Fe)
- Polyethylene (PE)
- Printed Circuit Board Epoxy
- Acrylonitrile Butadiene Styrene (ABS)
- Other Plastics
- Borosilicate Glass
- Copper (Cu)
- Poly(methyl methacrylate) (PMMA)
- Aluminum (Al)
- Low-Level Additions (<1%)****

Substance	% Mass
Steel	41.9%
Acrylonitrile Butadiene Styrene (ABS)	13.6%
Polycarbonate (PC)	12.4%
Other Plastics	5.9%
Silica (SiO ₂)	3.9%
Borosilicate Glass	3.9%
Polyethylene Terephthalate (PET) / Polybutylene Terephthalate (PBT)	2.8%
Copper (Cu)	2.5%
Iron (Fe)	2.3%
Poly(methyl Methacrylate) (PMMA)	1.9%
Polyethylene (PE)	1.5%
Aluminum (Al)	1.3%
Printed Circuit Board Epoxy	1.0%
Low-Level Additions (<1%)****	5.2%

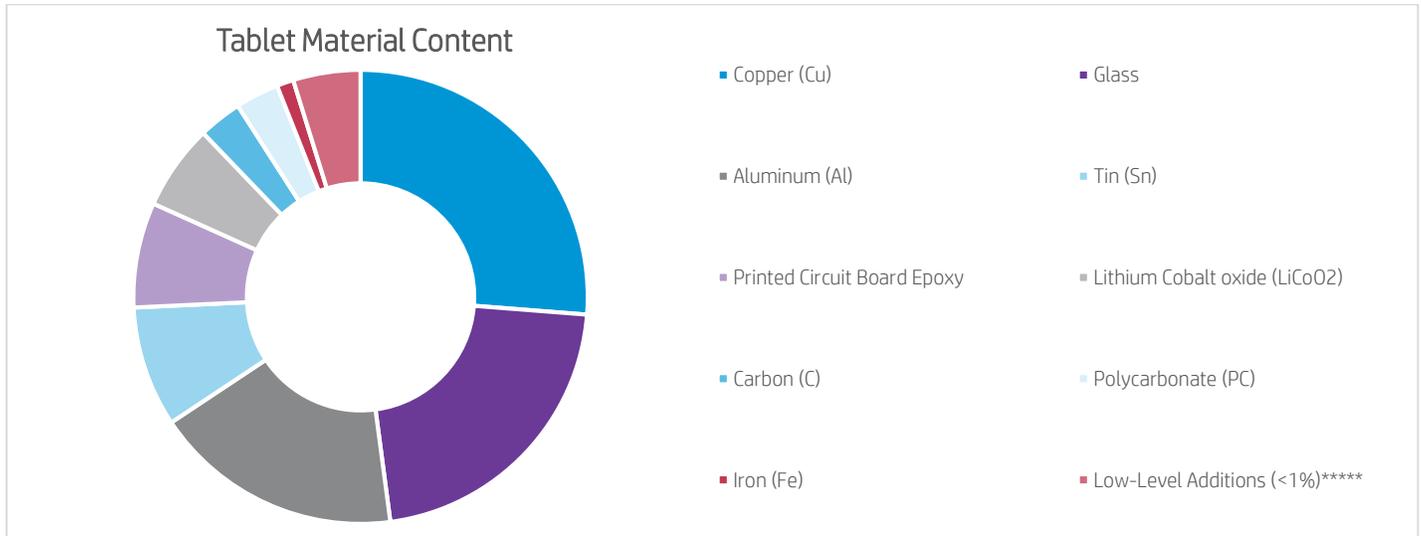
****Included in low-level additions are the following substances. Not listed are substances that comprise less than 0.1% by weight of the product:

Substance	% Mass
Polyoxymethylene (POM)	0.6%
Aluminum Oxide (Al ₂ O ₃)	0.4%
Paper	0.4%
Nickel (Ni)	0.3%
Cellulose Triacetate (TAC) film	0.3%
Zinc (Zn)	0.3%
Tin (Sn)	0.3%
Copper Beryllium (Cu-0.7Be) ⁹	0.3%
Liquid Crystal Polymer (LCP)	0.3%
Polyimide (PI)	0.3%
Polyamides (PA)	0.2%
Barium Titanate (BaTiO ₃)	0.2%
Silicone	0.2%
Polyphenylene Sulfide (PPS)	0.1%
Calcium Oxide (CaO)	0.1%
Carbon (C)	0.1%

⁹ Beryllium is restricted in the HP General Specification for the Environment with a threshold limit of 1000ppm with the exemption of ceramics in electronic components and electrical bonding applications of beryllium copper, such as connectors, springs, or EMI gaskets.

Tablet Material Content

A typical tablet contains more than 120 substances, many in very small amounts (see graph). The table and chart below illustrate the greatest mass substances in a typical tablet comprising a cumulative concentration of nearly 99%¹⁰. Each remaining substance comprises less than 0.1% by weight of the product.



Substance	% Mass
Copper (Cu)	26.3%
Glass	21.7%
Aluminum (Al)	17.8%
Tin (Sn)	8.6%
Printed Circuit Board Epoxy	7.5%
Lithium Cobalt Oxide (LiCoO ₂)	6.1%
Carbon (C)	3.1%
Polycarbonate (PC)	3.1%
Iron (Fe)	1.2%
Low-Level Additions (<1%)*****	4.8%

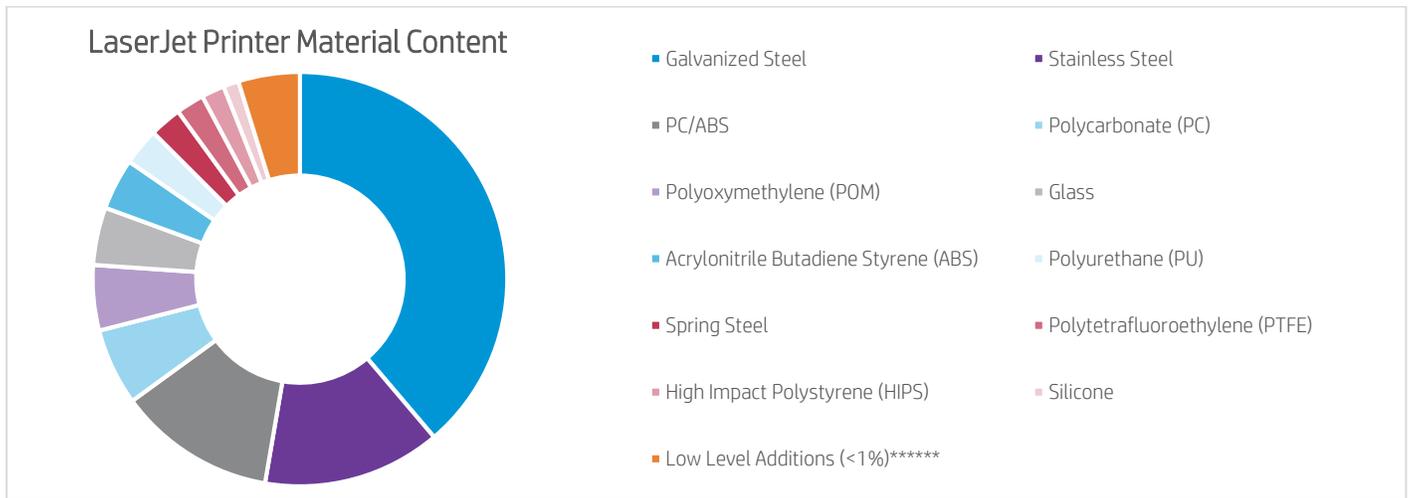
*****Included in low-level additions are the following substances. Not listed are substances that comprise less than 0.1% by weight of the product:

Substance	% Mass
Nickel (Ni)	0.6%
Flux residue	0.6%
Silicone Polymer	0.4%
Silver (Ag)	0.3%
Zinc (Zn)	0.3%
Silicon (Si)	0.3%
Silicon Dioxide (SiO ₂)	0.2%
Chromium (Cr)	0.2%
Barium Titanate (BaTiO ₃)	0.2%
Liquid Crystal Polymer (LCP)	0.1%

¹⁰ Graphic is based on literature research, component based studies, substance disclosure data from HP's suppliers, and test data. Weight and component composition is representative of a typical tablet of approximately 0.2 kg. This analysis does not include external components, such as the power cord. Power cords contain about 70% PVC and 30% Copper (PVC includes the PVC polymer, fillers and plasticizers). We have reduced PVC usage by shortening power cords and we offer PVC-free power cords that use thermoplastic elastomers in many countries worldwide, depending on the product. Data do not add up to 100% due to rounding.

LaserJet Printer Material Content

A typical LaserJet printer contains more than 130 substances, many in very small amounts (see graph). The table and chart below illustrate the greatest mass substances in a typical LaserJet printer comprising a cumulative concentration of nearly 99%¹¹. Each remaining substance comprises less than 0.1% by weight of the product.



Substance	% Mass
Galvanized Steel	38.8%
Stainless Steel	13.9%
Polycarbonate (PC) / Acrylonitrile Butadiene Styrene (ABS)	12.3%
Polycarbonate (PC)	6.0%
Polyoxymethylene (POM)	5.1%
Glass	4.5%
Acrylonitrile Butadiene Styrene (ABS)	4.0%
Polyurethane (PU)	2.9%
Spring Steel	2.5%
Polytetrafluoroethylene (PTFE)	2.2%
High Impact Polystyrene (HIPS)	1.8%
Silicone	1.2%
Low Level Additions (<1%)******	4.8%

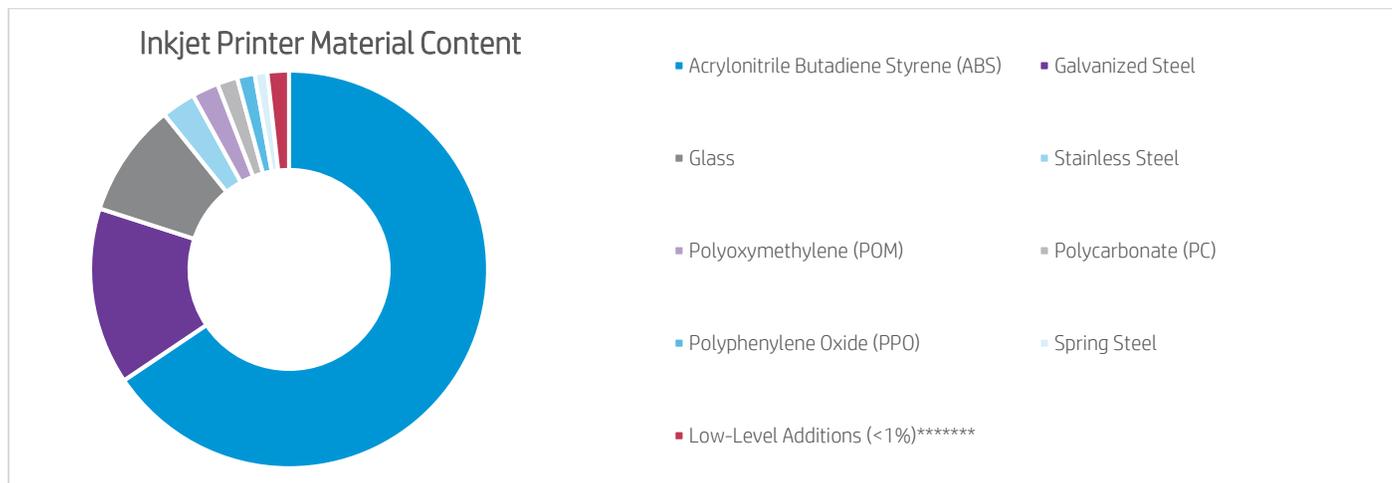
******Included in low-level additions are the following substances. Not listed are substances that comprise less than 0.1% by weight of the product:

Substance	% Mass
Copper (Cu)	0.98%
Printed Circuit Board Epoxy	0.95%
Aluminum (Al)	0.71%
Toner	0.42%
Silicon Dioxide (SiO ₂)	0.39%
Calcium Oxide (CaO)	0.12%
Brass	0.12%
Polyethylene (PE)	0.11%
Tin (Sn)	0.11%
Aluminum Oxide (Al ₂ O ₃)	0.11%

¹¹ Graphic is based on literature research, component based studies, substance disclosure data from HP's suppliers, and test data. Weight and component composition is representative of a typical LaserJet printer of approximately 20 kg. This analysis does not include external components, such as the power cord. Power cords contain about 70% PVC and 30% Copper (PVC includes the PVC polymer, fillers and plasticizers). We have reduced PVC usage by shortening power cords and we offer PVC-free power cords that use thermoplastic elastomers in many countries worldwide, depending on the product. Data do not add up to 100% due to rounding.

Inkjet Printer Material Content

A typical inkjet printer contains more than 130 substances, many in very small amounts. The table and chart below illustrate the greatest mass substances in a typical inkjet printer comprising a cumulative concentration of nearly 98%¹². Each remaining substance comprises less than 0.1% by weight of the product.



Substance	% Mass
Acrylonitrile Butadiene Styrene (ABS)	63.8%
Galvanized Steel	14.0%
Glass	9.0%
Stainless Steel	2.7%
Polyoxymethylene (POM)	2.1%
Polycarbonate (PC)	1.6%
Polyphenylene Oxide (PPO)	1.4%
Spring Steel	1.0%
Low-Level Additions (<1%)*****	1.7%

*****Included in low-level additions are the following substances. Not listed are substances that comprise less than 0.1% by weight of the product:

Substance	% Mass
Ferrite	0.5%
Copper (Cu)	0.4%
Epoxy	0.3%
Rubber	0.2%
Polypropylene (PP)	0.1%
Silicate	0.1%

¹² Graphic is based on literature research, component based studies, substance disclosure data from HP's suppliers, and test data. Weight and component composition is representative of a typical Inkjet printer of approximately 20 kg. This analysis does not include external components, such as the power cord. Power cords contain about 70% PVC and 30% Copper (PVC includes the PVC polymer, fillers and plasticizers). We have reduced PVC usage by shortening power cords and we offer PVC-free power cords that use thermoplastic elastomers in many countries worldwide, depending on the product. Data do not add up to 100% due to rounding.