Annex B2 - Product environmental attributes
Computers and computer monitors

The declaration may be published only when all rows and/or fields marked with * are filled-in (n.a. for not applicable). Additional information regarding each item may be found under P15.

Brand *	***HP***	Logo
Company name *	***HP***	
Contact information * e-mail address	***HP Sustainability and Compliance Center*** ***sustainability@hp.com***	
Internet site *	***http://www.hp.com/hpinfo/globalcitizenship/environment/***	
Additional information		

The company declares (based on product specification or test results based obtained from sample testing), that the product conforms to the statements given in this declaration.	
Type of product *	***Workstation***
Commercial name *	***HP Z4 G5 Workstation ENERGY STAR***
Model number *	***Z4 G5***
Issue date *	***3/6/2023***
Intended market *	☒ **Global** ☒ **Europe** ☐ **Asia, Pacific & Japan** ☐ **Americas** ☐ **Other**
Additional information	

This is an uncontrolled copy when in printed form. Please refer to the contact information for the latest version.

About Annex B2
Annex B2 reflects Product environmental attributes relevant for Computers and Computer Monitors. The following items from the ECMA-370 Main body are not shown in the template:
P4.1 – P4.3 Consumable materials
P9.1 TEC and Print speed
P10.2 - P10.3 Chemical emissions from printing products
P11.1 - P11.3 Consumable materials for printing products.

Model number *	***Z4 G5***	**Logo**	
Issue date *	***3/6/2023***		

Product environmental attributes - Legal requirements		**Requirement met**		
Item		Yes	No	n.a.
P1	**Hazardous substances and preparations**			
P1.1*	Products do comply with current European RoHS Directive. (See legal reference and NOTE B1)	☒	☐	
P1.2*	Products do not contain Asbestos (see legal reference). Comment: Legal reference has no maximum concentration value.	☒	☐	
P1.3*	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), hydrobromofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachloride, 1,1,1-trichloroethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum concentration values.	☒	☐	
P1.4*	Products do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlorinated terphenyl (PCT) in preparations (see legal reference).	☒	☐	
P1.5*	Products do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in the chain containing at least 48% per mass of chlorine in the SCCP (see legal reference).	☒	☐	
P1.6*	Parts with direct and prolonged skin contact do not release nickel in concentrations above 0,5 μg/cm²/week (see legal reference). Comment: Max limit in legal reference when tested according to EN1811:2011-5.	☒	☐	☐
P1.7*	REACH Article 33 information about substances in articles is available at (add URL or mail contact): REACH Article 33 Declarations (hp.com)	☒	☐	☐
P2	**Batteries**			
P2.1*	If the product contains a battery or an accumulator, the battery/accumulator is labeled with the disposal symbol. Information on proper disposal is provided in user manual. (See legal reference)	☒	☐	☐
P2.2*	Batteries or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmium. (See legal reference)	☒	☐	☐
P2.3*	Batteries and accumulators are readily removable. (See legal reference)	☐	☐	☒
P2.4*	Documentation includes the number of cycles the (secondary) battery can withstand. (See legal reference)	☒	☐	☐
P2.5*	When internal batteries of a notebook computer cannot be “accessed and replaced by a nonprofessional user”, the related text is present and legible on the external packaging (see legal reference)	☒	☐	☐
P3	**Conformity verification & Eco design (ErP)**			
P3.1*	The product is CE-marked to show conformance with applicable legal requirements (see legal reference). The Declaration of Conformity can be requested at (add link or e-mail address): http://www8.hp.com/uk/en/certifications/technical/regulations-certificates.html sustainability@hp.com	☒	☐	☐
P3.2*	The product complies with the applicable Eco design requirements for energy-related products, (see legal reference). Required information is; ☐ given in item P15 or added to this document, ☒ available at (add URL): https://h20195.www2.hp.com/v2/library.aspx?doctype=92&footer=88&filter_doctype=no&showregionfacet=yes&filter_country=no&cc=us&lc=en&filter_oid=no&filter_prodtype=rw&prodtype=ij&showproductcompatibility=yes&showregion=yes&showreglangcol=yes&showdescription=yes%23doctype-92&sortorder-popular&teasers-off&isRetired-false&isRHParentNode-false&titleCheck-false#doctype-92&sortorder-popular&teasers-off&isRetired-false&isRHParentNode-false&titleCheck-false	☒ ☐	☐ ☐	☐ ☐
P5	**Product packaging**			
P5.1*	Packaging and packaging components do not contain more than 0,01% lead, mercury, cadmium and hexavalent chromium by weight of these together.	☒	☐	
P5.2*	The packaging materials are marked with abbreviations and numbers indicating the nature of the material(s) used (see legal reference).	☒	☐	☐
P5.3*	The product packaging material is free from ozone depleting substances as specified in the Montreal Protocol (see legal reference). Comment: Legal reference has no maximum concentration values.	☒	☐	☐
P6	**Treatment information**			
P6.1*	Information for recyclers/treatment facilities is available (see legal reference).	☒	☐	☐

NOTE B1 Restriction applies to the homogeneous material, unless other specified and expressed in weight %. Stating “Yes” means that the product is compliant with the mandatory requirements.

Model number *	***Z4 G5***	**Logo**	
Issue date *	***3/6/2023***		

Product environmental attributes - Market requirements (See General NOTE GN below) **- Environmental conscious design**		**Requirement met**		
Item	*=mandatory to fill in. Additional information regarding each item may be found under P14.	Yes	No	n.a.
P7	**Design** **Disassembly, recycling**			
P7.1*	Parts that have to be treated separately are easily separable	☒	☐	☐
P7.2*	Plastic materials in covers/housing have no surface coating.	☐	☒	☐
P7.3*	Plastic parts > 100 g consist of one material or of easily separable materials.	☒	☐	☐
P7.4*	Plastic parts > 25 g have material codes according to ISO 11469 referring ISO 1043-4.	☒	☐	☐
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.	☒	☐	☐
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).	☒	☐	☐
	Product lifetime			
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives	☒	☐	☐
P7.8*	Upgrading can be done using commonly available tools	☒	☐	☐
P7.9	Spare parts are available after end of production for: **5** years			☐
P7.10	Service is available after end of production for: **5** years			☐
	Material and substance requirements			
P7.11*	Product cover/housing material type (e.g. plastics, metal, aluminum): Material type: ***ABS*** Material type: ***PC+ABS*** Material type: ***Steel***			
P7.12	Insulation materials of external electrical cables are PVC free.	☐	☒	☐
P7.13	Insulation materials of internal electrical cables are PVC free.	☒	☐	☐
P7.14	External plastic casing/cover parts > 25 g contain no more than 0,1% weight (1000 ppm) bromine and 0,1% weight (1000 ppm) chlorine attributable to brominated flame retardants, chlorinated flame retardants, and polyvinyl chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) chlorine in parts containing more than 25% post-consumer recycled content.	☒	☐	☐
P7.15	Printed circuit boards, PCBs (without components) are low halogen: all ☐ PCBs > 25 g ☒ are low halogen as defined in IEC 61249-2-21. (See [5]NOTE B2)	☒	☐	☐
P7.16	Flame retarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4: Marking: ***>PC+ABS-FR(40)<***	☒	☐	☐
P7.17	Alt. 1: Chemical specifications of flame retardants in printed circuit boards > 25 g (without components): TBBPA (additive) ☐, TBBPA (reactive) ☐ (See NOTE B3), Other; chemical name: , CAS #: Alt. 2: Chemical specifications of flame retardants in printed circuit boards (without components) > 25 g according ISO 1043-4: ***FR(40)***	☐ ☒	☐ ☐	☐ ☐
P7.18	Alt. 1: Flame retarded plastic parts > 25 g contain the following flame retardant substances/preparations in concentrations above 0,1%: 1. Chemical name: , CAS #: (See NOTE B4) 2. Chemical name: , CAS #: " 3. Chemical name: , CAS #: " Alt. 2: Chemical specifications of flame retardants in plastic parts > 25 g according ISO 1043-4:***FR(40)***	☐ ☒	☐ ☐	☐ ☐
P7.19	In plastic parts > 25 g, flame retardant substances/preparations above 0,1% are used which have been assigned the following Risk phrases; ***R50,R53***and Hazard statements: ***H400 Very toxic to aquatic life with long lasting effects, H413 may cause long lasting effects to aquatic life*** The source(s) for these classifications is/are found at (add URL(s)): ***http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database*** (See note B5)	☒	☐	☐

GENERAL NOTE Standard references should direct to the latest version of a standard. If an older version of a standard is used, section P15 shall be used for explanation.

NOTE B2 IEC 61249-2-21 defines maximum limits of 900 ppm for each of the substances chlorine and bromine and a maximum limit of 1500ppm of these substances combined. The standard does not address fluorine, iodine and astatine which are included in the group of halogens.

NOTE B3 and B4 A Guidance document on Chemical substances is available; see http://www.ecma-international.org/publications/standards/Ecma-370.htm.

NOTE B5 If a certain substance has been assigned a certain risk phrases / hazard statement in the referenced source, this does not necessarily mean the substance has been tested for all of the hazards referred to by a certain customer.

Model number *	***Z4 G5***	**Logo**
Issue date *	***3/6/2023***	

Product environmental attributes - Market requirements (continued)		**Requirement met**		
Item		Yes	No	n.a.
	Material and substance requirements (continued)			
P7.20*	Postconsumer recycled plastic material content is used in the product (See NOTE B6): If YES; at least one of the two alternatives below shall be answered; a) Of total plastic parts' weight > 25 g, the postconsumer recycled plastic material content (calculated as a percentage of total plastic by weight) is ***42.0*****%**. or b) The weight of recycled material is g.	☐	☐	☐
P7.21*	Biobased plastic material content is used in the product (See NOTE B7): If YES; at least one of the two alternatives below shall be answered; a) Of total plastic parts' weight > 25 g, the biobased plastic material content (calculated as a percentage of total plastic by weight) is %. or b) The weight of the biobased plastic material is g.	☐	☒	☐
P7.22*	Light sources are free from mercury, i.e. less than 0,1 mg/lamp. If mercury is used specify: Number of lamps: and maximum mercury content per lamp: mg	☐	☐	☒
P7.23*	If product includes an integral display, the total mercury content in the integrated display: mg	☐	☐	☒
P8	**Batteries**			
P8.1*	Battery chemical composition: ***lithium/manganese dioxide***			☒
P9	**Energy consumption (See NOTE B8)**			
P9.1	For the product the following power levels or energy consumptions are reported:			

Energy mode *	Power level at **100** V AC	Power level at **115** V AC	Power level at **230** V AC	Reference/Standard for energy modes and test method *	
EPS No-load (External power supply / charger plugged in the wall outlet but disconnected from the product.)	N/A	N/A	N/A	***EPS Energy Test Report***	
PTEC * Typical Energy Consumption	***45.69*** W	***44.82 W***	***45.57 W***	***EnergyStar@ Program Requirements for Computer***	☐
ETEC * Annual Energy Consumption	kWh/year	kWh/year	kWh/year	***EnergyStar@ Program Requirements for Computer***	☒
External Power Supply Efficiency Level (International Efficiency Marking Protocol) * :				***EnergyStar@ Program Requirements for Computer***	☒
Display resolution * : megapixels				***EnergyStar@ Program Requirements for Computer***	☒
Default time to enter energy save mode: minutes				***EnergyStar@ Program Requirements for Computer***	☒

P9.2*	Information about the energy save function is provided with the product.	☒	☐	☐
P9.3	Energy efficiency class (monitors only):			☒

NOTE B6 Applies to a product containing plastic parts whose combined weight exceeds 100 g with the exception of printed circuit boards, cables, connectors and electronic components and bio-based plastic material.

NOTE B7 The following is to be excluded from the calculation of percentage: printed circuit boards, labels, cables, connectors and electronic components and postconsumer recycled plastic

NOTE B8 A Guidance document on Energy Efficiency is available;

see http://www.ecma-international.org/publications/standards/Ecma-370.htm.

Model number *	Z4 G5	Logo	
Issue date *	03/06/2023		

Product environmental attributes - Market requirements (continued)				Requirement met		
Item				Yes	No	n.a.
P10	**Emissions**					
	Noise emission – Declared according to ISO 9296 (See NOTE **B9**)					
P10.1	Mode	Mode description	Statistical upper limit A-weighted sound power level, $L_{WA,c}$ (B)			
	Idle	* *Fans on*	* *3.4*			☐
	Operation	* *Fans on, HDD spinning, SSD*	* *3.4*			☐
	Other mode	*Active Mode*	*3.3*			
	Measured according to: ☒ ISO 7779 ☒ ECMA-74 ☐ Other (only if not covered by ECMA-74)					
	Electromagnetic emissions					
P10.4	Computer display meets the requirement for low frequency electromagnetic fields of the following voluntary program(s):			☐	☐	☐
P12	**Ergonomics for computing products**					
P12.1*	The display meets the ergonomic requirements of ISO 9241-307 for visual display technologies.			☐	☐	☒
P12.2*	The physical input device meets the requirements of ISO 9995 and ISO 9241-410.			☒	☐	☐
P13	**Packaging and documentation**					
P13.1*	Product packaging material type(s): *PAPER/Corrugated* weight (kg): *1.459* Product packaging material type(s): *PAPER/Molded pulp* weight (kg): *1.016* Product packaging material type(s): *Plastic/Polyethylene Low density-LDPE* weight (kg): *0.050* Product packaging material type(s): *Plastic/Polyethylene Expanded-EPE* weight (kg): *0.144*					
P13.2*	Product plastic primary packaging is free from PVC.			☒	☐	☐
P13.3*	For product primary corrugated fiberboard packaging, specify the contained percentage of minimum post-consumer recovered fiber content: *62* %					☐
P13.4*	Specify media for user and product documentation (tick box): Electronic ☐, Paper ☐, Other ☒ Available on Hp.com					☐
P13.5	(Please only complete this item if paper documentation used) User and product documentation on paper media is chlorine-free: If Yes, please specify:			☒	☐	
	Totally chlorine-free			☒		
	Elemental chlorine-free			☐		
	Processed chlorine-free			☐		
P14	**Voluntary programs**					
P14.1	The product meets the requirements of the following voluntary program(s):					
	ENERGY STAR®	Criteria version: *9.0*	Date: *3/6/2023*	Product category: *Workstation*		
	Eco-label: *TCO*	Criteria version: *9.0*	Date: *3/6/2023*	Product category: *Workstation*		
	Eco-label: *EPEAT*	Criteria version: *IEEE 1680.1*	Date: *3/6/2023*	Product category: *Workstation*		
P15	**Additional information (See NOTE B10)**					
P9	***Energy consumption of computer products; description of the tested product configuration:***					
All Sections	***1. Product environmental information contained in this declaration is valid as of the date the declaration is published. Changes to external standards referenced in the IT Eco-Declaration may invalidate some information contained in this declaration over***					
P1	***1. This product does not include DEHP, BBP, DIBP, or DBP.***					

NOTE B9 A Guidance document on Acoustic Noise is available; see http://www.ecma-international.org/publications/standards/Ecma-370.htm.

NOTE B10 Additional lines may be inserted to declare further items, by positioning the cursor at the far right of the row and hitting the <Enter> key.

P7 ***Product Upgradability and Reparability***

The following table is provided in accordance with IEEE 1680.1-2018[6] criterion 4.4.2.5.

feature	Available[1]	Repairable[2]	Replaceable[2]	Upgradeable[3]
processor	Y	Y	Y	Y
main memory	Y	Y	Y	Y
mass storage (internal)	Y	Y	Y	Y
wireless networking	Y	Y	Y	Y
integrated graphics	N	N/A	N/A	N/A
discrete graphics	Y	Y	Y	Y
display panel	N	N/A	N/A	N/A
integrated keyboard	N	N/A	N/A	N/A
battery	Y	Y	Y	Y
power supply	Y	Y	Y	Y
fan assemblies	Y	Y	Y	Y
speaker(s) (internal)	Y	Y	Y	Y
camera	N	N/A	N/A	N/A
touchpad	N	N/A	N/A	N/A
I/O connectors and external power connector	Y	Y	Y	Y
readers [5]	N	N/A	N/A	N/A

Table notes:
[1] Y* = feature is available, but may not be included in every configuration
[2] Product can be repaired (returned to fully functional state) if feature fails.
[3] Feature can be replaced using only commonly available tools without soldering or de-soldering. Y* = replacement may require replacing an assembly to which the feature is attached.
[4] Base feature may be upgraded by replacing it with a higher performance module or by expanding capacity through use of expansion slots. NOTE: This evaluation does not
account for situations in which the initial configuration purchased is already maximized. Contact HP Sales or an HP authorized reseller to determine the availability of upgrade parts and method to obtain them in your geography.
[5] This feature category includes readers such as fingerprint readers, smart card readers, and other read-only devices, but excludes read/write devices.

P9 ***1. European Union Commission Regulation 1275/2008- Energy Efficiency Information:***

Mode / Condition	Power Consumption in Watts at 230 VAC Input Voltage	Default Time to Mode / Conditi (if applicable)
Off Mode (if applicable)	***0.24***	Not Applicable
Standby Mode (if applicable)	Not Applicable	Not Applicable
Network Standby / Sleep / Long Idle Mode if all wired network ports are connected and all wireless network ports are activated (if applicable)	***2.230***	***20min***
Network Standby / Sleep / Long Idle Mode (if applicable)	***0.980W***	***Less than 60 sec***

2.European Union Commission Regulation 1275/2008- Wireless Network Instructions:

Where applicable, activate and deactivate a wireless network using the instructions provided in the product user guide or the operating system. Information is also available at www.hp.com/support.

6 IEEE Standard for Environmental and Social Responsibility Assessment of Computers and Displays

P15.1 ***Critical Mineral Content disclosure***

	Zinc	***Manganese***	***Praseodymium***
Secondary batteries			
Magnets	***>1-5g***	***6-25g***	***101-500mg***
Display panels/ screens			

Note: Report data in mass ranges, such as < 1 mg, 1-100 mg, 101-500 mg, 501-1,000 mg, >1-5 g, 6-25 g, > 25 g.

P10	**Sound Pressure Level**		
	Noise emission – Declared according to ISO 9296 (See NOTE [B9])		
P10.1	Mode	Mode description	Statistical upper limit A-weighted sound pressure level, $L_{pA,m}$ (dB)
	Idle	* ***Fans on***	* ***15***
	Operation	* ***Fans on, HDD spinning,SSD***	* ***15***
	Other mode	***Active Mode***	***15***
	Measured according to: ☒ ISO 7779 ☒ ECMA-74 ☐ ***Other*** ***(only if not covered by ECMA-74)***		

Legal references Europe Annex B2

Reference	Declaration item
Directive 2011/65/EU (RoHS Directive)* * Specific exemptions apply for certain products and applications.	P1.1, P3.1
Regulation (EC) 1907/2006 (REACH Regulation), annex XVII	P1.2, P1.4, P1.6, P1.7
Regulation (EC) 2037/2000, 2038/2000, 2039/2000 (Marketing and use of Ozone layer depleting substances)	P1.3, P5.3
Norwegian regulation relating to restrictions on the use of certain dangerous chemicals 20.12.2002	P1.5
Directive 2006/66/EC (Battery and accumulators Directive), as amended.* * These provisions shall not apply where, for safety, performance, medical or data integrity reasons, continuity of power supply is necessary and requires a permanent connection between the appliance and the battery or accumulator.	P2.1, P2.2, P2,3, P8.1
Directive 2014/35/EU (Low Voltage Directive)	P3.1
Directive 2014/30/EU (EMC Directive)	P3.1
Directive 2014/53/EU (RE Directive)	P3.1
Regulation (EC) 801/2013 amending Regulation (EC) No 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Regulation (EC) No 642/2009 with regard to ecodesign requirements for televisions	P3.1, P3.2
Commission Regulation (EC) No 278/2009 of 6 April 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for no-load condition electric power demand and average active efficiency of external power supplies	P3.1, P3.2, P9.1
COMMISSION REGULATION (EU) No 617/2013 of 26 June 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for computers and computer servers	P2.4, P2.5, P3.1, P3.2, P7.23, P9.1
Regulation（EC）No 1272/2008 (CLP Regulation)	P7.19
Directive 2004/12/EC (Packaging Directive)	P5.1
Decision 97/129/EC (Secondary packaging legislation)	P5.2
Directive 2012/19/EU (WEEE directive) Implementing Regulation (EU) 2019/290 establishing the format for registration and reporting of producers of electrical and electronic equipment to the register. Commission Implementing Regulation 2017/699 establishing a common methodology for the calculation of the weight of electrical and electronic equipment (EEE) placed on the national market in each Member State and a common methodology for the calculation of the quantity of waste electrical and electronic equipment (WEEE) generated by weight in each Member State.	P6.1