



Ecma/TC38-TG3/2015/026 (Rev. 1 – 15 April 2015)

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 *	HP Sustainability and Compliance Center	ו וויי	
e-mail address	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.				
Comornis to the statemen				
Type of product *	Notebook PC			
Commercial name *	HP ProBook 450 G8 Notebook PC			
Model number *	ProBook 450 G8			
Issue date *	09/28/2020			
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 *	ProBook 450 G8	Logo	(50)
Issue date *	09/28/2020		

Product	Require	men	t met	
Item	2 -	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).	e 🔀		
P1.6*	Parts with direct and prolonged skin contact do not release nickel in concentrations above 0,5 μg/cm²/weel (see legal reference). Comment: Max limit in legal reference when tested according to EN1811:2011-5.	k 🔀		
P1.7*	REACH Article 33 information about substances in articles is available at (add URL or mail contact): http://www.hp.com/hpinfo/globalcitizenship/environment/productdata/reachdesktop-pcs.html			
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 lega reference)	l 🔀		
P2.3*	Batteries and accumulators are readily removable. (See legal reference)	\boxtimes		
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 Eco design requirements for energy-related products, (see legal reference).			
	Required information is; given in item P15 or added to this document,	\boxtimes		
	available at (add URL):			
P5	Product packaging			
P5.1*	Packaging and packaging components do not contain more than 0,01% lead, mercury, cadmium ar hexavalent chromium by weight of these together.			
P5.2*	The packaging materials are marked with abbreviations and numbers indicating the nature of the material(used (see legal reference).	s) 🔀		
P5.3*	The product packaging material is free from ozone depleting substances as specified in the Montreal Protoc (see legal reference).	ol 🔀		
DC	Comment: Legal reference has no maximum concentration values.			
P6 1*	Treatment information		$\overline{}$	
P6.1*	Information for recyclers/treatment facilities is available (see legal reference).	\boxtimes		

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 *	ProBook 450 G8	Logo	(4)
Issue date *	09/28/2020		

Issue date * 09/28/2020		09/28/2020	W		
Produc		mental attributes - Market requirements (See General NOTE GN below)	Doguiro	mont	mat
Itom		onmental conscious design tory to fill in. Additional information regarding each item may be found under P14.	Require Yes	Ment No	
P7	Design	tory to fill in. Additional information regarding each item may be found under F14.	res	INO	n.a.
		mbly, recycling			
P7.1*	Parts tha	at have to be treated separately are easily separable			
P7.2*	Plastic m		\boxtimes		
P7.3*	Plastic p	arts > 100 g consist of one material or of easily separable materials.	\boxtimes		
P7.4*	Plastic p	arts > 25 g have material codes according to ISO 11469 referring ISO 1043-4.	\boxtimes		
P7.5	Plastic p	arts are free from metal inlays or have inlays that can be removed with commonly available to	ools.	$\overline{\sqcap}$	
P7.6*	Labels a	re easily separable. (This requirement does not apply to safety/regulatory labels).		$\overline{\Box}$	
	Product	lifetime			
P7.7*	Upgradir	ng can be done e.g. with processor, memory, cards or drives	\boxtimes		
P7.8*	Upgradir	ng can be done using commonly available tools	$\overline{\boxtimes}$		
P7.9	Spare pa	arts are available after end of production for: 5 years			
P7.10		is available after end of production for: 5 years			
		and substance requirements			
P7.11*	Product	cover/housing material type (e.g. plastics, metal, aluminum):			
D= 10		type: PC+ABS Material type: PC Material type:		<u> </u>	
P7.12		n materials of external electrical cables are PVC free.			Щ.
P7.13		n materials of internal electrical cables are PVC free.		Щ.	
P7.14	weight (* polyvinyl	plastic casing/cover parts > 25 g contain no more than 0,1% weight (1000 ppm) bromine an 1000 ppm) chlorine attributable to brominated flame retardants, chlorinated flame retardan l chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) chlorine in parts coran 25% post-consumer recycled content.	its, and		Ш
P7.15		circuit boards, PCBs (without components) are low halogen: all 🔲 PCBs > 25 g 🔀 are low h	nalogen 🔀		
		ed in IEC 61249-2-21. (See 1NOTE B2)			
P7.16	Marking:	etarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4: > PC+ABS-TD5FR(40) < , > PC(REC30)-GF25FR(40) <			
P7.17		nemical specifications of flame retardants in printed circuit boards > 25 g (without components (additive) \square , TBBPA (reactive) \square (See NOTE B3), Other; chemical name: , CAS #:	s):		
		nemical specifications of flame retardants in printed circuit boards (without components) > 25 g ISO 1043-4: $FR(40)$	g		
P7.18	Δlt 1· El	ame retarded plastic parts > 25 g contain the following flame retardant substances/preparate			
7.10	concentr 1. Chem 2. Chem	ical name: , CAS #: "			
		nemical specifications of flame retardants in plastic parts > 25 g according ISO 1043-4: : BS-TD5FR(40)<, >PC(REC30)-GF25FR(40)<			
P7.19	In plastic assigned lasting The sour	c parts > 25 g, flame retardant substances/preparations above 0,1% are used which have been at the following Risk phrases; R53 and Hazard statements: H413 may cause long tharmful effects to aquatic life. Trec(s) for these classifications is/are found at (add URL(s)): The enal of the second statements are used which have been appeared by the second statements are used which have been appeared by the second statements are used which have been appeared by the second statements are used which have been appeared by the second statements are used which have been appeared by the second statements are used which have been appeared by the second statements are used which have been appeared by the second statements are used which have been at the second statements are used which have been at the second statements.			
P7.20*		sumer recycled plastic material content is used in the product (See Note B6):			
	If YES: a	at least one of the two alternatives below shall be answered;	_		

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.

Of total plastic parts' weight > 25 g, the postconsumer recycled plastic material content (calculated as

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

a percentage of total plastic by weight) is 12.40 %.

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.

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: Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard, criterion 4.2.1.1.

or b) The weight of recycled material is g.							
~	, The Weight e	r recycled material is	9.				
Model numb	per * ProBoo	k 450 G8			Logo	45	
Issue date *		09/28/2020					
						47	
Product er	nvironmental a	ttributes - Market r	equirements (conti	nued)		Requiremen	nt met
Item			•	•		Yes No	n.a.
		stance requirements					
P7.21* E	Biobased plastic n	naterial content is used	d in the product (See N	OTE B7):			
	f YES; at least on	e of the two alternative	es below shall be answ	ered;			
6	a) Of total plasti total plastic b		the biobased plastic m	aterial content (calculat	ed as a percen	tage of	
C	or .	, ,					
		f the biobased plastic	material is g. less than 0,1 mg/lamp.				
		specify: Number of lar		ium mercury content pe	r lamp:	mg 🔲 🔲	Ш
	Batteries	•	•	,	•		
	Battery chemical o	•					
		tion (See NOTE B8)	l				
			ls or energy consumption	•	T =		
Energy mode	e *	Power level at 100 V AC	Power level at 115 V AC	Power level at 230 V AC	Reference/St modes and te	andard for energy est method *	Ш
EPS No-load		0.045 W	0.049 W	0.083 W	EPS Energy	Report Data	
(External po	wer supply / ged in the wall						
	connected from						
the product.)							
PTEC *	0 "	W	W	W		STAR® Program	\boxtimes
i ypicai Ener	gy Consumption				Requiremen	ts for Computers	
ETEC *		13.88 kWh/year	14.74 kWh/year	14.59 kWh/year	ENERGY ST	AR® Program	
	gy Consumption		,		Requiremen	ts for Computers	ш
External Pov	ver Supply Efficie	ncy Level (Internationa	al Efficiency Marking Pro	otocol) * : V/		AR® Program ts for Computers	
					Requiremen	ts for computers	
Display reso	lution * : 1920*10	80 megapixels			ENERGY ST	AR® Program	
					Requiremen	ts for Computers	
Default time	to enter energy sa	ave mode: minu	ites		ENERGY ST	AR® Program	
Dolault time	to criter energy 3	ave mode.	1103			ts for Computers	
P9.2* Information about the energy save function is provided with the product.							
P9.3	P9.3 Energy efficiency class (monitors only):						
P10 E	Emissions						
Noise emission – Declared according to ISO 9296 (See NOTE							
P10.1	Mode N	Mode description		Statistical upper limi $L_{WA,c}$ (B)	t A-weighted so	ound power level,	
	dle *	Fans on, HDD spinn	ing (if applicable)	* 2.6			
l <u> </u>		Fans on, HDD spinn Fans on, HDD spinn		* 2.8			
	Other mode	cii, ribb opiiii	9				
l —		ng to: X ISO 7779	FCMA-74	1			

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

(only if not covered by ECMA-74)

NOTE B8 A Guidance document on Energy Efficiency is available; see http://www.ecma-international.org/publications/standards/Ecma-370.htm

Other

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

Model number *		ProBook 450 G8				Logo	1		
Issue date *		09/28/2020					ШД		
	environn	nental attributes	- Market requirements (cor	ntinued)		R	equire		met
Item							Yes	No	n.a.
D40.4		nagnetic emission			C 11 C 11	·			
P10.4	Computer display meets the requirement for low frequency electromagnetic fields of the following voluntary program(s):								
P12		nics for computing							
P12.1*			omic requirements of ISO 9241-			gies.	\boxtimes		
P12.2*	The phys	sical input device me	eets the requirements of ISO 999	95 and ISO 9241-410).		\boxtimes		
P13		ng and documenta							
P13.1*	Product	packaging material	type(s): PAPER/Corrugated			weight (kg): 0.295			
	Product	oackaging material i	type(s): PAPER/Molded Pulp type(s): PLASTIC/Polyethylene	low density DDI	=	weight (kg): 0.192 weight (kg): 0.010			
P13.2*	Product	olastic primary pack	aging is free from PVC.	TOW GENSILY - LDFL	_	weight (kg). 0.010			
P13.3*			ated fiberboard packaging, spec	cify the contained n	ercentage	of minimum nost-			\vdash
1 10.0		er recovered fiber co		ony the contained p	crocritage	or minimum poor			
P13.4*			product documentation (tick box):						
	Electroni	c 🔀, Paper 🔲, O	ther						
D40 F	/- :								
P13.5			em if paper documentation used ation on paper media is chlorine-						
		ease specify:	ation on paper media is chionne-	illee.			\boxtimes	Ш	
		nlorine-free							
	•	al chlorine-free							
	Processe	ed chlorine-free							
P14		y programs							
P14.1	The prod	uct meets the requi	rements of the following voluntar	y program(s):					
	ENERGY	/ STAR®	Criteria version: 8.0	Date: 09/28/2020	Product of	category: Commerc	ial Note	book	,
	Eco-label: <i>EPEAT</i> Criteria version: <i>IEEE 1680.1</i> Date: 09/28/2020 Product category: <i>Commercial Notebooks</i>								
	Eco-label: TCO Criteria version: 8 Date: 09/28/2020 Product category: Commercial Notebooks								
P15	Addition	al information (Se	e NOTE B10)						
All	1. Produ	ct environmental i	information contained in this d	leclaration is valid	as of the o	late the declaration	n is pub	lished	l.
Sections	declarat		ards referenced in the IT Eco-l	Deciaration may inv	raiidate so	ome information co	ontaine	ın th	IS
P1			nclude DEHP, BBP, DIBP, or DI	BP.					
			, , , , , , , , , , , , , , , , , , , ,						

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.

Product Upgradability and Reparability The following table is provided in accordance with IEEE 1680.1-2018⁶ criterion 4.4.2.5. Upgradeable Available Repairable Replaceable feature [1] [2] processor Υ Υ Ν main memory Υ Υ mass storage (internal) Y wireless networking integrated graphics discrete graphics N/A N/A N/A Ν display panel Υ Υ integrated keyboard Υ Υ batteries Υ power supply fan assemblies Ν speaker(s) (internal) Ν camera touchpad Υ Ν I/O connectors and external Υ Υ Υ Ν power connector readers [5] Ν 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 Energy consumption of computer products; description of the tested product configuration: **P**9 1. European Union Commission Regulation 1275/2008- Energy Efficiency Information: Mode / Condition Power Consumption in Watts at 230 VAC Input Default Time to Mode / Condit Voltage (if applicable) Off Mode (if applicable) 0.33 W Not Applicable Standby Mode (if applicable) Not Applicable Not Applicable Network Standby / Sleep / Long Idle Mode if N/A N/A all wired network ports are connected and all wireless network ports are activated (if applicable) 1.329 W 10 Min Network Standby / Sleep / Long Idle Mode (if applicable) 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. P10 **Sound Pressure Level** Noise emission - Declared according to ISO 9296 (See NOTE B9) P10.1 Statistical upper limit A-weighted sound pressure level, Mode Mode description $L_{pA,m}$ (dB) Fans on, HDD spinning (if applicable) * 14.5 Idle

20.4

(only if not covered by ECMA-74)

Fans on, HDD spinning

Other

Measured according to: X ISO 7779 X ECMA-74

Operation

Other mode

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

Legal references Europe Annex B2

Reference	Declaration item
Directive 2011/65/EU (RoHS Directive) * * Specific exemptions apply for certain products and applications.	P1.1
Regulation (EC) 1907/2006(REACH, 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 2013/56/EC (Battery and accumulators Directive) * * 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 2006/95/EC (Low Voltage Directive)	P3.1
Directive 2004/108/EC (EMC Directive)	P3.1
Directive 1999/5/EC (R&TTE 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
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)	P6.1



Ecma/TC38-TG3/2015/024

Company environmental profile - THE ECO DECLARATION

Brand	HP	Logo	
Company name *	HP		
Contact information *	HP Sustainability and Compliance Center (SCC)		
	sustainability@hp.com		
Internet site *	www.hp.com/hpinfo/globalcitizenship/environment/index.html		
Issue date *	2014-06-01		
Intended market *	☐ Global ☐ Europe ☐ Asia, Pacific & Japan ☐ Americas	Other	
Additional information			

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The declaration may be published only when all rows and/or fields marked with an * are filled-in (n.a. for not applicable). Additional information regarding each item may be found under C7.

Compan	y environmental profile - Legal requirements	Requirement met		
Item		Yes	No	n.a.
C1	Product recycling			
C1.1*	The company participates in a system or has its own system for collection and recycling of end of life produc in countries where the company puts them on the market and where required (see legal reference)	ts 🔀		
C2	Battery recycling			
C2.1*	The company participates in a system or has its own system for collection and recycling of batteries countries where the company puts products on the market (see legal reference) or pays eco tax / fee where required.			
C3	Packaging recycling			
C3.1*	The company participates in a system or has its own system for collection and recycling of packaging materi in countries where the company puts products on the market and where required (see legal reference)	al 🔀		
	y environmental profile - Market requirements	Requiren		
Item		Yes	No	n.a.
C4	Environmental policy and environmental management			
C4.1*	The company has a documented environmental policy approved by the management.	\boxtimes		
C4.2*	The company has an environmental management system covering:			
	Product development			
	Manufacturing	$\overline{\square}$	一	
	If so certified according to: X ISO 14001 X Other as specified in C7			
C4.3	The company regularly publishes an environmental report.	\boxtimes		
	If so, it meets the recommendations of ⊠The Global Reporting Initiative ☐ Other as specified in C7			
C5	Recycling			
C5.1*	Information about the product, battery & packaging take back system (C1, C2 and C3) is available in printe	:d 🔀		
	or electronic format.			
C6	Voluntary programs			
C6.1	The company meets the requirements of the following voluntary program/s:			
	Voluntary Agreement: Criteria version: Date: Product category: Voluntary Agreement: Criteria version: Date: Product category:			
C7	Additional information			
	HP has received ISO 14001 certification for its manufacturing operations (Worldwide Manufacturing	of Comp	uting a	and
	Imaging Products and Related Operations) and for product design for its Personal Systems Product			
	Enterprise Printing Products. The product design certifications include HP-wide product environment	ental des	ign	
	processes (such as HP's General Specification for the Environment) that cover all HP products.			
	HP is committed to responsible business practices and transparency in its global citizenship polici			
	We have a long history of working with suppliers to monitor and improve their social and environm			
	(SER) performance when required, as well as improving standards in the industry. HP endorses the			шц
	Conduct in its entirety, and we have supplemented it with additional requirements specific to freedometers.			n as
	well as HP's Student and Dispatch Worker Guidance Standard for Supplier Facilities in the People's			
	(PRC). HP also has a strong Global Human Rights Policy in place. HP expects its suppliers to estab			
	processes regarding conflict minerals. HP conducts due diligence on its supply chain annually incl			
	information about our suppliers' own due diligence and the smelters and refiners used. HP was the	first IT c	ompai	ny to
	publish its supply chain smelter list. HP follows the Global Reporting Initiative (GRI) guidelines as a	basis for	repor	ting.
	The GRI index provides easy reference to HP's Living Progress Report (LPR) content. HP offers tak	e back se	rvices	of
	products and printing suppliers in some 70 countries. Please refer to HP's Livings Progress Report	for more	detail	s on
	our global efforts.			

Legal references Europe Annex A

Reference	Declaration item
Directive 2012/19/EU (WEEE directive)	C1.1
Directive 2006/66/EC (Battery and accumulators Directive) * * 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.	C2.1
Directive 2004/12/EC (Packaging Directive)	C3.1
Decision 97/129/EC (Secondary packaging legislation)	C3.1