

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

Annex B2 - Product environmental attributes Notebooks and Tablets

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 *	Lenovo	Logo	
Company name *	Lenovo		
Contact information *	Lenovo Global Environmental Affairs		$\partial D \partial V \partial$
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	alcarter@lenovo.com		
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Additional information	The latest version of this document can be found at:		
	http://www.lenovo.com/ecodeclaration		

The company declares (The company declares (based on product specification or test results based obtained from sample testing), that the product						
conforms to the statement	nts given in this declaration.						
Type of product *	Notebook						
Commercial name *	ThinkBook 14 G5+ ARP						
Model number *	21HY						
Issue date *	2022/11/16						
Intended market *	🗌 Global 📃 Europe 📃 Asia, Pacific & Japan 📃 Americas 🔀 Other <i>China</i>						
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 n	umber *	21HY Log	0		
lssue da	ate *	2022/11/16	Ler	100	Om
Produc	t environ	mental attributes - Legal requirements	Requi	iremer	nt met
Item			Ye	s No	n.a.
P1		ous substances and preparations			
P1.1*	Products	s do comply with current European RoHS Directive. (See legal reference and NOTE B1)	\square	1 🗆	
P1.2*		s do not contain Asbestos (see legal reference). nt: Legal reference has no maximum concentration value.	\boxtimes	1 🗆	
P1.3*	Products hydrobro trichloro	s do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), omofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachlorid ethane, methyl bromide (see legal reference). Comment: Legal reference has no maxim ration values.]	
P1.4*	Products	s do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlorin: yl (PCT) in preparations (see legal reference).	ated 🔀]	
P1.5*		s do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carbon a ontaining at least 48% per mass of chlorine in the SCCP (see legal reference).	atoms in the]	
P1.6*	(see leg	th direct and prolonged skin contact do not release nickel in concentrations above 0,5 μξ al reference). nt: Max limit in legal reference when tested according to EN1811:2011-5.	g/cm²/week		
P1.7*	REACH	Article 33 information about substances in articles is available at (add URL or mail conta www.lenovo.com/us/en/Lenovo-REACH-SVHC-	act):]	
P2	Batterie	S			
P2.1*		oduct contains a battery or an accumulator, the battery/accumulator is labeled with the d Information on proper disposal is provided in user manual. (See legal reference)	isposal 🛛 🔀]	
P2.2*	Batterie: referenc	s or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmium. æ)	(See legal]	
P2.3*	Batteries	s and accumulators are readily removable. (See legal reference)	X		
P3	-	nity verification & Eco design (ErP)		·	
P3.1*	The proo The Dec https://	duct is CE-marked to show conformance with applicable legal requirements (see legal re claration of Conformity can be requested at (add link or e-mail address): www.lenovo.com/us/en/compliance/eu-doc for EU www.lenovo.com/us/en/compliance/uk-doc for UK	ference). 🛛 🔀] 🗆	
P3.2*		duct complies with the Eco design requirements for energy-related products,		1 🗖	
		al reference).		. 🗆	
	· •	d information is; available at (add URL):	\boxtimes	1	
	https://	www.lenovo.com/us/en/compliance/eco-declaration			
P5	Product	t packaging			
	Packagi	ng and packaging components do not contain more than 0,01% lead, mercury, ca ent chromium by weight of these together.	dmium and 🛛 🔀] 🗌	
P5.1*	hexaval				
P5.1*	The pac	kaging materials are marked with abbreviations and numbers indicating the nature of the	e material(s)] 🗆	
P5.1* P5.2*	The pac used (se The proc (see leg	kaging materials are marked with abbreviations and numbers indicating the nature of the be legal reference). duct packaging material is free from ozone depleting substances as specified in the Montr al reference).]	
	The pac used (se The proo (see leg Comme	kaging materials are marked with abbreviations and numbers indicating the nature of the ee legal reference). duct packaging material is free from ozone depleting substances as specified in the Montr			

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 nu	ımber *	21HY	Logo			
Issue dat	late * 2022/11/16				ovc	тн
Product	environ	mental attributes - Market requirements (See General NOTE GN	below)			
		onmental conscious design	F	Require	nent	net
Item		tory to fill in. Additional information regarding each item may be found under P14.		Yes	No	n.a.
P7		Disassembly, recycling It have to be treated separately are easily separable				
P7.1*						<u> </u>
P7.2*		naterials in covers/housing have no surface coating.		<u> </u>		
P7.3*		arts > 100 g consist of one material or of easily separable materials.		<u> </u>	<u> </u>	\boxtimes
P7.4*	-	arts > 25 g have material codes according to ISO 11469 referring ISO 1043-4.				
P7.5	-	arts are free from metal inlays or have inlays that can be removed with commonly a	available tools.	\square		
P7.6*	Labels a	re easily separable. (This requirement does not apply to safety/regulatory labels).				
	Product					
P7.7*		ng can be done e.g. with processor, memory, cards or drives		\square		
P7.8*	10	ng can be done using commonly available tools		\square		
P7.9	Spare pa	arts are available after end of production for: 5 years				
P7.10	Service i	s available after end of production for: 5 years				
		and substance requirements		·		
P7.11*		cover/housing material type (e.g. plastics, metal, aluminum):				
P7.12		type: PC+ABS+15%Talc Material type: PC Materia n materials of external electrical cables are PVC free.	al type: POM			
P7.12		n materials of external electrical cables are PVC free.			<u> </u>	
					<u> </u>	
P7.14	weight (´ polyvinyl	plastic casing/cover parts > 25 g contain no more than 0,1% weight (1000 ppm) b 1000 ppm) chlorine attributable to brominated flame retardants, chlorinated flame chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) chlorine in n 25% post-consumer recycled content.	e retardants, and			
P7.15	Printed c	ircuit boards, PCBs (without components) are low halogen: all 🔀 PCBs > 25 g 🔀 ed in IEC 61249-2-21. (See 1NOTE B2)	are low halogen	\square		
P7.16	Flame re Marking:	<pre>tarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4: >PC+ABS-TD15FR(40)<</pre>		\square		
P7.17	TBBF	nemical specifications of flame retardants in printed circuit boards > 25 g (without or PA (additive), TBBPA (reactive) (See NOTE B3), Other: <i>Dihydrooxa-phosph</i> pxid CAS #: 35948-25-5				
	accordin	nemical specifications of flame retardants in printed circuit boards (without compone g ISO 1043-4: <i>FR(16)</i>	, -	\square		
P7.18	concentr 1. Chemi 2. Chemi	ame retarded plastic parts > 25 g contain the following flame retardant substance ations above 0,1%: ical name: BPADP , CAS #: 181028-79-5 (See NOTE B4) ical name: , CAS #: " ical name: , CAS #: "	es/preparations in			
		ical name: , CAS #: " nemical specifications of flame retardants in plastic parts > 25 g according ISO 104	3-4: FR(40)	\boxtimes		
P7.19	In plastic	parts > 25 g, flame retardant substances/preparations above 0,1% are used which the following Risk phrases; and Hazard statements:				
			note B5)			
P7.20*	Postcons	sumer recycled plastic material content is used in the product (See Note B6):		\boxtimes		
	a) Oft ape or	It least one of the two alternatives below shall be answered; otal plastic parts' weight > 25 g, the postconsumer recycled plastic material conten ercentage of total plastic by weight) is 15.96% . e weight of recycled material is 43.85 g.	t (calculated as			

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.

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.

Model num	nber *	21HY				Logo			
Issue date	*	2022/11/	16			Lenovo.			
Product e	environn	nental at	tributes - Market r	equirements (conti	nued)	Requirement me			
Item						Yes No n.a.			
<u> </u>									
	Matorial	and subs	tance requirements	(continued)					
P7.21*				in the product (See N	OTE B7):				
		-							
				es below shall be answer		ted as a percentage of			
			/ weight) is %.						
	or								
D7.00*	b) The weight of the biobased plastic material is g. Light sources are free from mercury, i.e. less than 0,1 mg/lamp.								
P7.22*			ree from mercury, i.e. specify: Number of lar		um mercury content pe	er lamp: mg			
P8	Batteries		speeny. Number of lar		an meredry content pe	i dinp. ing			
P8.1*	Battery c	hemical c	omposition: <i>Lithium i</i>	on					
P9	Energy of	onsump	tion (See NOTE B8)						
P9.1				s or energy consumption					
Energy mod	le *		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 *			
Peak (On-n	nax)		100 W	100 W	100 W	Full load			
Category	/ <u>2</u>								
Short Idle S Enabled	State - Wo	OL	6.62 W	6.62 W	6.85 W	ENERGY STAR Computers V8			
Long Idle S	State 14/	<u>.</u>	0.74 W	0.72 W	0.75 W	ENERCY STAR Computers 1/8			
Enabled			0.74 W	0.72 VV	0.75 VV	ENERGY STAR Computers V8			
Sleep (S3)			0.77 W	0.74 W	0.79 W	ENERGY STAR Computers V8			
Sleep (S3)			0.74 W	0.72 W	0.75 W	ENERGY STAR Computers V8			
Off (S5) - W			0.51 W	0.52 W	0.61 W	ENERGY STAR Computers V8			
Оff (S5) - И		bled	0.36 W	0.36 W	0.42 W	ENERGY STAR Computers V8			
EPS No-loa (External power su wall outlet but disc		blugged in the	0.045 W	0.045 W	0.045 W				
ETEC *		ne produce.)	21.52 kWh/year	21.44 kWh/year	22.42 kWh/year	E _{TEC} = (8760/1000) x (P _{off} x 0.25			
Annual Ene	rgy Consı	umption			-	+ P _{sleep} x 0.35 + P _{long_ldle} x 0.10+			
			D Off Mada(S5) - M/	Ol Enchlady D Slear	Mada(S2) MOL Enable	P _{short Idle} x 0.30)			
External Po	wer Sunn	ly Efficien		Efficiency Marking Pro		ed; P _{idle} : Idle State - WOL Enabled			
		-	o megapixels			┼─────────────────────────────────────			
. ,			ve mode: 10 minutes			<u> </u>			
				on io naovidod with the	www.elu.et				
				on is provided with the	product.				
P9.3			lass (monitors only):						
P10	Emission		Declared according to	ISO 9296 (See NOTE	(P0)				
P10.1	Mode		lode description	130 9290 (See NOTE		t A-weighted sound power level, $L_{WA,c}$ (B)			
	Idle		System Idle		* 3.3				
	Operation		CPU:Operation		* 3.8				
	Other mo	de D	eclared A-weighted soun	d pressure level (dB)	22 (operator positio				
	Other mo	de D	eclared A-weighted soun	d pressure level (dB)	39.7 (operator posit	tion desktop – operating)			
		1	<i>p</i> Am	-					
	Measure	d accordir	° <u>–</u> –	ECMA-74	FOMA 74)				
	Other (only if not covered by ECMA-74)								

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

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

Model nu	mber *	21HY				Logo	Lono		
Issue dat	e *	2022/11/16					Leno	VO	я
Product	environr	nental attribut	es - Market requirements	s (continued)		Require	ment	met
Item				-			Yes	No	n.a.
		nagnetic emissi							
P10.4			he requirement for low freque AC adapter only)	ency electroma	ignetic fields of the fol	lowing voluntary	\boxtimes		
P12		mics for comput							
P12.1*	The disp	lay meets the erg	onomic requirements of ISO	9241-307 for \	isual display technolo	ogies.	\boxtimes		
P12.2*	The phy	sical input device	meets the requirements of IS	SO 9995 and IS	SO 9241-410.		\boxtimes		
P13	Packagi	ing and docume	ntation						
P13.1	Product Product Product	packaging materi packaging materi	al type(s): Cardboard al type(s): Carboard al type(s): Solid EPE al type(s): PE bag al type(s): PES		weight (kg): 0.266 weight (kg): 0.0275 weight (kg): 0.070 weight (kg): 0.014kg 0.0028				
P13.2*	Product	plastic primary pa	ackaging is free from PVC.				\boxtimes		
P13.3*	For proc	duct primary corr er recovered fiber	ugated fiberboard packaging content: 84 %	g, specify the	contained percentage	e of minimum po			
P13.4*	Specify		d product documentation (tic Other	k box):					
P13.5	Úser and If Yes, p Totally c Element		s item if paper documentatior entation on paper media is ch						
P14		ry programs							
P14.1	The proc		quirements of the following vo Criteria version: 8	oluntary progra Date:		category: 2			
	Eco-labe		Criteria version:	Date:		category:			
	Eco-labe		Criteria version:	Date:		category:			
P15	Additio	nal information (See NOTE B10)		·				
P9	Energy	consumption of	specific configuration may	vary; descrip	tion of the tested pr	oduct configura	tion:		
	informat knowled provideo informat	ion contained in t ge available at th I here is approxim ion.	o representations, guarantees his document. All information e time of completion, and sup nate and provided for informa	provided by su oplier shall have tional purposes	upplier in this docume e no obligation to upd s only. See a Lenovo	nt is provided bas ate such informa	sed on supp tion. The inf	olier's format	ion
P9			I Notebooks & Tablet Compu //index.cfm?fuseaction=find			code=CO			

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.

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

Lenovo ErP Lot3 Information Sheet - PC / Notebook -

As required by 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 (ErP Lot3).

Products scope of this sheet:

Desktop computer, integrated desktop computer, and notebook computer

This document is only valid in connection with the IT Eco Declaration of the specific Product.

Commercial name	ThinkBook 14 G5+ ARP	Logo
Model Number	21HY	
Issue Date	2022/11/16	Lenovo
Additional information		· · · · · · · · · · · · · · · · · · ·

	Product environmental attributes					
d)	Year of manufacture:					
e)	Etec value (kWh) per ErP Lot 3 Catego disabled and if the system is tested with				cards (dGfx) are	
(f)	Etec value (kWh) per ErP Lot 3 Categor enable	ry and capability adjust	ments applied when a	all discrete graphics of	cards (dGfx) are	
		Category A (according to ErP Lot 3)	Category B (according to ErP Lot 3)	Category C (according to ErP Lot 3)	Category D (according to ErP Lot 3)	
	Memory over base [GB]	32	32			
lents sting	Additional internal storage	NO (Yes / No)	NO (Yes / No)	(Yes / No)	(Yes / No)	
capability adjustments applied during testing	Discrete television tuner	NO (Yes / No)	NO (Yes / No)	(Yes / No)	(Yes / No)	
ability a lied du	Discrete Audio Card	NO (Yes / No)	NO (Yes / No)	(Yes / No)	(Yes / No)	
capa	Discrete graphics Card(s) [number / #]	NO #: (Yes / No)	Yes #: 1 (Yes / No)	#: (Yes / No)	#: (Yes / No)	
	Category of discrete graphics Card(s)	NO	G4			
esults	Etec Value (kWh) - dGfx disabled all discrete graphics cards (dGfx) are disabled/ UMA is active for switchable graphics/ product has no graphics cards (dGfx)	4.72				
Test results	Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled		4.32			
(g)	Idle state power demand (Watts);		•		0.686	
(h)	Sleep mode power demand (Watts);				0.686	
(i)	Sleep mode with WOL enabled power de	emand (Watts) (where	enabled);		NA	
j)	Off mode power demand (Watts);				0.439	
(k)	Off mode with WOL enabled power demand (Watts) (where enabled); NA					
(I)	Internal power supply efficiency at 10 %	, 20 %, 50 % and 100 %	% of rated output pow	er (if applicable):		
	10% 20% 50%	100% Avera	age			
(m)	External power supply efficiency (if appli	icable)*:				
	Average active efficiency: 85.76%, 85.	27%, 84.09%, 83.45	% ,84.64 %			
(-)	*internal note: show values for all available external p		•	-4-61		
(o)	Minimum number of loading cycles that	the datteries can withs	tand (applies only to n	otebook computers):	300 cycles	
(p-1)	Measurement methodology used to dete	ermine information men	ntioned in points (I) – ir	nternal PSU efficiency:		

	Measurement methodology used to determine information mentioned in points (m) – external PSU efficiency: ENERGY STAR® Program Requirements for Single Voltage External Ac-Dc and Ac-Ac Power Supplies Eligibility Criteria (Version 2.0)					
(p-3) Measurement metho	Measurement methodology used to determine information mentioned in points (o) – loading cycles batteries: ≥70% of Cmin					
	Measurement methodology used to determine information mentioned in maximum, idle, sleep, off mode power as defined in Point P9.1 in the Product IT Eco Declaration: IEC 62623					
(q) Sequence of steps f	or achieving a stable condition with respect to power	demand::				
	Power on -> Wait 5 minutes -> Stable col	ndition				
(r) Description of how s	leep and/or off mode was selected or programmed:					
	Begin menu -> Power -> Select sleep or o	off mode				
(s) Sequence of events off mode:NA	required to reach the mode where the equipment au	tomatically changes to sleep and/or				
(u) Length of time after	te condition before the computer automatically re s not exceed the applicable power demand requireme r a period of user inactivity in which the compute	ents for sleep mode (in minutes): r automatically reaches a power	10min NA			
	wer power demand requirement than sleep mode (in ore the display sleep mode is set to activate after a		10min			
	nergy-saving potential of power management function					
	Refer to User Guide					
(x) User information on	how to enable the power management functionality:					
	Refer to User Guide					
the electricity supply	measurements: — test voltage in V and frequency in v system, — information and documentation on the in- sting:230V50HZ-2%-Edition 2.0, 2011-01, Section 4	strumentation, set-up and circuits				
Additional Notebook Batte	ry Information: Battery[ies] not user replaceable	Battery[ies] user replaceable	n/a			
	The battery[ies] in this product cannot be easily replaced by users themselves. ¹⁾		n/a			
Internal/built-in Battery						
External/detachable Battery						
Bios Backup Battery						
Other:						
Additional information						
) he battery[ies] in this product cannot be e						
as baterías de este producto no pueden	продукт не може да се замени[ят] лесно от самите потребител ser sustituidas fácilmente por los propios usuarios.	ли.				
ýměnu baterie/baterií v tomto výrobku by rugeren kan ikke uden videre udskifte ba	tteriet/batterierne i dette produkt.					
asutajad ei saa selle toote akut/akusid is	/können nicht ohne weiteres vom Benutzer selbst ausgetauscht w e hõlpsasti asendada. ρούν να αντικατασταθούν εύκολα από τους ίδιους τους χρήστες	verden.				
	uit ne peuvent être facilement remplacée(s) par les utilisateurs eu	ıx-mêmes.				
	on può/possono essere facilmente sostituita/e dall'utente.					
	akumulatoru(_us)					
	ojas negali lengvai pakeisti.					
termék akkumulátorát/akkumulátorait a batterija/batteriji f'dan il-prodott ma tistax	ojas negali lengvai pakeisti. ielhasználó nem tudja egyedül egyszerűen kicserélni. //jistgħux tiġi/jiġu sostitwita/i mill-utenti stess.					
termék akkumulátorát/akkumulátorait a batterija/batteriji f'dan il-prodott ma tistax atteriet [ene] i dette produktet kan ikke le e batterij(en) in dit product is (zijn) door o	ojas negali lengvai pakeisti. Ielhasználó nem tudja egyedül egyszerűen kicserélni. /jistghux tigi/jigu sostitwita/i mill-utenti stess. It erstattes av brukerne selv. Ie gebruiker niet gemakkelijk vervangbaar.					
batterija/batteriji f'dan il-prodott ma tistav atteriet [ene] i dette produktet kan ikke le e batterij(en) in dit product is (zijn) door żytkownik nie może sam w łatwy sposób ou as baterias deste produto não poden	ojas negali lengvai pakeisti. Ielhasználó nem tudja egyedül egyszerűen kicserélni. /jistghux tigi/jigu sostitwita/i mill-utenti stess. It erstattes av brukerne selv. Ie gebruiker niet gemakkelijk vervangbaar.					

Baterijoaterije v tem izdeiku uporabniki sami ne morejo zianka zamenjaŭ Taman tuotteen akku [akut] ei[vāt] ole helposti käyttäjän vaihdettavissa. Det är inte enkelt för kunden att själv byta ut batteriet/batterierna. Bu üründeki batarya(lar) kullanıcılar tarafından kolaylıkla değiştirilemez.