

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	and the second			
Contact information *	Lenovo Global Environmental Affairs	ODOV/O			
e-mail address	Alvin L Carter	Lenovo			
	alcarter@lenovo.com				
Internet site *	http://www.lenovo.com/social_responsibility/us/en/environment.	.html			
Additional information	The latest version of this document can be found at:				
	http://www.lenovo.com/ecodeclaration				

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 *	Type of product * Notebook				
Commercial name *	Lenovo ThinkBook 14 3rd Gen ACL / Zhaoyang K4E/ Lenovo K4E				
Model number *	21A2, 82MQ				
Issue date *	2020/1/18				
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 numb	er * 21A2, 82MQ	Logo	Law		1
Issue date *	2021/1/18		Len	ove) _
Product en	vironmental attributes - Legal requirements		Require		t met
Item			Yes	No	n.a.
	azardous substances and preparations				
	oducts do comply with current European RoHS Directive. (See legal reference and NO	DTE B1)			
С	oducts do not contain Asbestos (see legal reference). omment: Legal reference has no maximum concentration value.		\square		
hy tri	oducts do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), drobromofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetr chloroethane, methyl bromide (see legal reference). Comment: Legal reference has n ncentration values.		1-		
P1.4* P te	oducts do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% pol phenyl (PCT) in preparations (see legal reference).		\boxtimes		
P1.5* Pi cł	oducts do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 ain containing at least 48% per mass of chlorine in the SCCP (see legal reference).				
(s	arts with direct and prolonged skin contact do not release nickel in concentrations above ee legal reference). comment: Max limit in legal reference when tested according to EN1811:2011-5.	/e 0,5 μg/cm²/\	week 🔀		
P1.7* R	EACH Article 33 information about substances in articles is available at (add URL or m tps://www.lenovo.com/us/en/Lenovo-REACH-SVHC-Disclosure	ail contact):			
	atteries				
S	the product contains a battery or an accumulator, the battery/accumulator is labeled w mbol. Information on proper disposal is provided in user manual. (See legal reference)			
	atteries or accumulators do not contain more than 0,0005% of mercury or 0,002% of ca ference)	admium. (See	legal 🔀		
P2.3* B	atteries and accumulators are readily removable. (See legal reference)		\square		
P3 C	onformity verification & Eco design (ErP)				
TI	ne product is CE-marked to show conformance with applicable legal requirements (see the Declaration of Conformity can be requested at (add link or e-mail address): tps://www.lenovo.com/us/en/compliance/eu-doc	legal referenc	:e). 🔀		
P3.2* TI	e product complies with the Eco design requirements for energy-related products, ee legal reference).		\boxtimes		
R	equired information is; given in item P15 or added to this document, available at (add URL): tps://www.lenovo.com/us/en/compliance/eco-declaration				
	oduct packaging				
P5.1* P	ackaging and packaging components do not contain more than 0,01% lead, mer xavalent chromium by weight of these together.	cury, cadmium	n and 🔀		
P5.2* TI	e packaging materials are marked with abbreviations and numbers indicating the natu ed (see legal reference).	ire of the mate	rial(s) 🔀		
P5.3* TI (s	e product packaging material is free from ozone depleting substances as specified in the se legal reference). Somment: Legal reference has no maximum concentration values.	ne Montreal Pro	otocol 🔀		
	eatment information				
	ormation 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 nu	ımber *	21A2, 82MQ	Logo	Lon	-	
Issue dat	te *	2021/1/18		Leno	DVC	-
Product	environ	mental attributes - Market requirements (See General NOTE GN	below)			
		onmental conscious design		Require		net
Item		tory to fill in. Additional information regarding each item may be found under P14.		Yes	No	n.a.
P7 P7.1*		Disassembly, recycling at have to be treated separately are easily separable				
						<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>
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	vailable tools.			
P7.6*		re easily separable. (This requirement does not apply to safety/regulatory labels).		\square		
		lifetime				
P7.7*		ng can be done e.g. with processor, memory, cards or drives				
P7.8*		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	is available after end of production for: 5 years				
		and substance requirements				
P7.11*		cover/housing material type (e.g. plastics, metal, aluminum):				
D7 10	Material	type: Aluminum 5052 Material type: Covestro FR3008 Materia n materials of external electrical cables are PVC free.	al type: Covestr	o FR3021		_
P7.12				<u> </u>		<u> </u>
P7.13		n materials of internal electrical cables are PVC free.				
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 I chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) chlorine in an 25% post-consumer recycled content.	e retardants, an	d 🗖		
P7.15	Printed of	circuit boards, PCBs (without components) are low halogen: all ⊠ PCBs > 25 g ed in IEC 61249-2-21. (See 1NOTE B2)	are low haloge	n 🔀		
P7.16		etarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4: > >PC+ABS< - >PC+ABS-TD15FR(40)<		\square		
P7.17		hemical specifications of flame retardants in printed circuit boards > 25 g (without co				
	TBBF	PA (additive), XTBBPA (reactive) (See NOTE B3), Other: chemical name, CAS	S #:	\boxtimes		
		hemical specifications of flame retardants in printed circuit boards (without compone g ISO 1043-4: <i>FR16</i>	ents) > 25 g	\boxtimes		
P7.18	Alt. 1: Fl	lame retarded plastic parts > 25 g contain the following flame retardant substance	s/preparations i	n		
	concentr 1. Chem 2. Chem	rations above 0,1%: ical name: , CAS #: (See NOTE B4) ical name: , CAS #: " ical name: , CAS #: "				
	<u>Alt. 2: </u> Cl	hemical specifications of flame retardants in plastic parts > 25 g according ISO 1043	3-4: FR(40)	\bowtie		
P7.19		parts > 25 g, flame retardant substances/preparations above 0,1% are used which				
	assigned	the following Risk phrases; and Hazard statements:				_
	The sou	rce(s) for these classifications is/are found at (add URL(s)): , (S	ee note B5)			
P7.20*		sumer recycled plastic material content is used in the product (See Note B6):		\square		
	a) Of t a p or	at least one of the two alternatives below shall be answered; total plastic parts' weight > 25 g, the postconsumer recycled plastic material conten ercentage of total plastic by weight) is 2.15% . e weight of recycled material is 11.5 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 number * Issue date *	21A2, 82MQ 2021/1/18	Logo	Lenovo
Product environm	nental attributes - Market requirements (continued)	•	Requirement met

Item

Requirement met Yes No n.a.

	Material and su	bstance requirements	s (continued)					
P7.21*		material content is use		NOTE B7):				
	If YES [,] at least o	one of the two alternativ	ves below shall be ans	wered [.]				
	a) Of total pla	stic parts' weight > 25 g		,	ated as a percentage of			
	•	by weight) is <mark>0</mark> %.						
	or b) The weight	of the biobased plastic	material is 0a					
P7.22*		e free from mercury, i.e		n				
	If mercury is used specify: Number of lamps: and maximum mercury content per lamp: mg							
P8	Batteries							
P8.1*	Battery chemica	I composition: Li-polyn	ner					
P9		nption (See NOTE B8)						
P9.1		the following power level Power level at						
Energy mo	ode "	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	-max)	65 W	65 W	65 W	Full load			
Catego	ry NB2							
Short Idle	e State - WOL	7.79 W	7.94 W	7.85 W	Use for ENERGY STAR V8			
Enabled					registration (Pidle)			
l ong Idle	State - WOL	5.81 W	5.69 W	5.22 W	Use for ENERGY STAR V8			
Enabled		0.07 11			registration (P _{idle})			
Clean (C)		0.021/0/	0.0210/	0.00.10/				
Sieep (SS	B) - WOL Enabled	0.93 W	0.93 W	0.99 W	Use for ENERGY STAR V8 registration (P _{sieep})			
Sleep (S3	8) - WOL Disabled	0.93 W	0.93 W	0.99 W	Use for ErP			
Off (S5) -	WOL	0.34 W	0.34 W	0.38 W	Use for ENERGY STAR V8			
Enabled/L	Disabled				registration, Use for ErP (Poff)			
EPS No-lo	bad	0.027 W	0.031 W	0.091 W				
(External power	supply / charger plugged in t	he						
PTEC *	isconnected from the product		NAW	NA W				
-	nergy Consumptior							
ETEC *		29.16 kWh/year	29.45 kWh/year	29.07 kWh/year	$E_{TEC} = (8760/1000) \times (P_{off} \times 0.25)$			
Annual Er	nergy Consumptior	1			+ $P_{sleep} \times 0.35 + P_{long_{ldle}} \times 0.10 +$			
		Poff: Off Mode(S5) - V	VOL Enabled: Psleen: Sle	ep Mode(S3) - WOL Enabl	P _{short Idle} x 0.30) led; P _{idle} : Idle State - WOL Enabled			
External F	ower Supply Effici	ency Level (Internation						
	solution * : 1920*1		, ,	,				
		save mode: 10 minutes	3					
P9.2*	8,	ut the energy save func		e product.				
P9.3		y class (monitors only):		- F				
P10	Emissions	, state (meritore only).						
. 10		- Declared according	to ISO 9296 (See NO	TE B9)				
P10.1	Mode	Mode description			nit A-weighted sound power level, <i>L_{WA,c}</i> (B)			
	Idle	* Idle		* 2.8				
	Operation	Operation * CPU Operating		* 3.3				
	Other mode	Declared A-weighted sou	nd pressure level (dB)	21.5 (operator pos	ition desktop – idle)			
		L_{pAm}						
	Other mode	Declared A-weighted sou	nd pressure level (dB)	29.3 (operator pos	ition desktop – operating)			
		L_{pAm}						
	Measured accor	ding to: 🔀 ISO 7779	ECMA-74	1				
l		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 <u>http://www.ecma-international.org/publications/standards/Ecma-370.htm</u>

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

Model nu	mber *	21A2, 82MQ			Logo	Long			
Issue dat	e *	2021/1/18				Leno	vo		
Product	environr	nental attribut	es - Market requirements	(continued)		Require	ment	met	
Item						Yes	No	n.a.	
		nagnetic emiss							
P10.4	program	(s):	the requirement for low freque	ncy electromagnetic fields	s of the following volunta	ary		\square	
P12	Ergonoi	mics for compu	ting products						
P12.1*	The disp	The display meets the ergonomic requirements of ISO 9241-307 for visual display technologies.							
P12.2*	The phys	The physical input device meets the requirements of ISO 9995 and ISO 9241-410.							
P13		ing and docume							
P13.1*	Product	packaging mater	ial type(s): EPE cushion weig	jht (kg): 0.016 jht (kg): 0.087 jht (kg): 0.307					
P13.2*			ackaging is free from PVC.			\boxtimes			
P13.3*		luct primary cor	rugated fiberboard packaging r content: 80 %	, specify the contained p	percentage of minimum				
P13.4*	Specify I		nd product documentation (tick	t box):					
P13.5	Ùser and		is item if paper documentation entation on paper media is chl						
	Totallv c	hlorine-free							
		al chlorine-free				H			
		ed chlorine-free				H			
P14		ry programs							
P14.1			equirements of the following vo	luntany program(s):					
F 14.1	The plot			iuntary program(s).					
	ENERG	Y STAR®	Criteria version: 8.0	Date: 2021/01/20	Product category: Not	ebook 2			
	Eco-labe	el:	Criteria version:	Date:	Product category:				
	Eco-labe		Criteria version:	Date:	Product category:				
P15	Addition	nal information	(See NOTE B10)						
P9	Energy	consumption o	f specific configuration may	vary; description of the	tested product config	uration:			
	informati knowled	ion contained in ge available at th I here is approxir	o representations, guarantees this document. All information the time of completion, and sup nate and provided for informat	provided by supplier in thi plier shall have no obligat	s document is provided ion to update such inform	based on supp mation. The inf	olier's ormat	ion	
P9	See Ene	ergy Star Qualifie	d Notebooks & Tablet Comput v/index.cfm?fuseaction=find_a						

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	Lenovo ThinkBook 14 3rd Gen ACL / Zhaoyang K4E/ Lenovo K4E	Logo
Model Number	21A2, 82MQ	Longua
Issue Date	2021/1/18	Lenovo
Additional information		

d)	Year of manufacture:				2021				
e)	Etec value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics cards (dGfx) are disabled and if the system is tested with switchable graphics mode with UMA driving the display.								
f)	Etec value (kWh) per ErP Lot 3 Categor enable	ry and capability adjust	ments applied when a	III 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]	40	()	()					
ients sting	Additional internal storage	Yes (Yes / No)	(Yes / No)	(Yes / No)	(Yes / No)				
adjustm ring tee	Discrete television tuner	No (Yes / No)	(Yes / No)	(Yes / No)	(Yes / No)				
capability adjustments applied during testing	Discrete Audio Card	No (Yes / No)	(Yes / No)	(Yes / No)	(Yes / No)				
cap; app	Discrete graphics Card(s) [number / #]	No #: (Yes / No)	# <u>:</u> (Yes / No)	#: (Yes / No)	#: (Yes / No)				
	Category of discrete graphics Card(s)	NA							
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)	15.7							
Test results	Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled								
g)	Idle state power demand (Watts);	1			4.81				
h)	Sleep mode power demand (Watts);				1.08				
i)	Sleep mode with WOL enabled power d	emand (Watts) (where	enabled);		1.08				
j)	Off mode power demand (Watts);				0.40				
k)	Off mode with WOL enabled power dem	and (Watts) (where en	abled);		0.40				
(I)	er (if applicable):								
	10% 20% 50%	100% Avera	ige						
(m)	External power supply efficiency (if appli	icable)*:							
	Average active efficiency: 90.40% mee	t Level VI							
(0)	*internal note: show values for all available external p Minimum number of loading cycles that		tand (applies only to p	otebook computers):					
		une patteries carr withs	and (applies only to h	olobook computers).	300				

(p-2)	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 methodology used to determine information mentioned in points (o) – loading cycles batteries: ≥70% of Cmin						
(p-4)	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 for	or achieving a stable condition with respect to power	demand::				
		Power on -> Wait 5 minutes -> Stable co	ndition				
(r)	Description of how s	leep and/or off mode was selected or programmed:					
		Begin menu -> Power -> Select sleep or c	off mode				
(s)	Sequence of events off mode: See User	required to reach the mode where the equipment au <i>Guide</i>	tomatically changes to sleep and/or				
(t)		te condition before the computer automatically re s not exceed the applicable power demand requirement		10 min			
(u)	Length of time after	r a period of user inactivity in which the compute wer power demand requirement than sleep mode (in	r automatically reaches a power	NA			
(v) (w)	Length of time before	bre the display sleep mode is set to activate after nergy-saving potential of power management functio	user inactivity (in minutes):	10 min			
、 <i>,</i>			-				
(x) (z)		how to enable the power management functionality : measurements: — test voltage in V and frequency in					
	used for electrical te	system, — information and documentation on the in sting: rogram Requirements for Single Voltage Externa Eligibility Criteria (Version 2.0)					
Additio	nal Notebook Batter	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⁾					
	/built-in Battery						
	l/detachable Battery						
Bios Ba	ckup Battery						
Other:							
Addition	al information						
kymynaröpia as baterías ó yměnu bater rugeren kan er Akku/die / asutajad ei s µmαrαpíα[-ε a/les batterie orisnik ne me a batteria/le l ietotāji paši r io gaminio b a batteria/le l ietotāji paši r io gaminio b termék akku batterija/batt atteriet [ene] zytkownik ni ou as bateri ateria (bateri ateria (bateri	ата[ите] батерия[и] в този п de este producto no pueden s ic/baterii v tomto výrobku by ikke uden videre udskifte bat Akkus dieses Produkts kan/ saa selle toote akut/akusid ise cj oro mpolóv αυτό δεν μπορ c(s présente(s) dans ce produ ože lako zamijeniti Bateriju sa batterie in questo prodotto nc nevar nomainīt šā ražojuma a aterijos [bateriju] pats vartoto umulátorát/akkumulátorait a fe teriji fdan il-prodott ma tistax, i dette produktet kan ikke let) in dit product is (zijn) door d e može sam w latwy sposób as deste produto não podem iile) din acest produs nu poat tomto výrobku nupoate vymie o v tem izdelku uporabniki sai	ούν να αντικατασταθούν εύκολα από τους ίδιους τους χρήστες iit ne peuvent être facilement remplacée(s) par les utilisateurs eu am u ovom proizvodu. on può/possono essere facilmente sostituita/e dall'utente. kumulatoru(-us). jas negali lengvai pakeisti. elhasználó nem tudja egyedül egyszerűen kicserélni. /jistgħux tiġ/ljġu sostitwita/i mill-utenti stess. tt erstattes av brukerne selv. e gebruiker niet gemakkelijk vervangbaar. wymienić baterii w tym produkcie. ser facilmente substituídas pelos próprios utilizadores. e (pot) fi uşor înlocuită (inlocuite) de utilizatorii înşişi.	verden.				

Det är inte enkelt för kunden att sjilv byta ut batterief/batterierna. Bu üründeki batarya(lar) kullanıcılar tarafından kolaylıkla değiştirilemez.