



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 * e-mail address	Lenovo Global Environmental Affairs Alvin L Carter alcarter@lenovo.com	Lenovo
Internet site *	https://www.lenovo.com/us/en/sustainability-resources/	
Additional information	The latest version of this document can be found at:	
	http://www.lenovo.com/ecodeclaration	

	based on product specification or test results based obtained from sample testing), that the product nts given in this declaration.
Type of product *	Notebook
Commercial name *	ThinkBook 13s G4 ARB / Lenovo K3 ARB
Model number *	21AS, 82Q6
Issue date *	2022/5/09
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 nu	ımber *	21AS, 82Q6 Logo	ana	10	
Issue da	te *	2022/5/9	enov	VO	
Product	environ	mental attributes - Legal requirements	Require	men	t met
Item		-	Yes	No	n.a.
P1	Hazardo	ous substances and preparations			
P1.1*	Products	s do comply with current European RoHS Directive. (See legal reference and NOTE B1)	\boxtimes		
P1.2*		s do not contain Asbestos (see legal reference). nt: Legal reference has no maximum concentration value.			
P1.3*	hydrobro trichloro	s do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), omofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachloride, 1,1,1-ethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum ration values.			
P1.4*		s do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlorinated // (PCT) in preparations (see legal reference).			
P1.5*		s do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in the ntaining at least 48% per mass of chlorine in the SCCP (see legal reference).			
P1.6*	Parts wit	th direct and prolonged skin contact do not release nickel in concentrations above $0.5~\mu g/cm^2/week$ al reference).			
P1.7*	REACH	nt: Max limit in legal reference when tested according to EN1811:2011-5. Article 33 information about substances in articles is available at (add URL or mail contact): www.lenovo.com/us/en/Lenovo-REACH-SVHC-Disclosure			
P2	Batterie	\$			
P2.1*		oduct contains a battery or an accumulator, the battery/accumulator is labeled with the disposal Information on proper disposal is provided in user manual. (See legal reference)	\boxtimes		
P2.2*	Batteries referenc	s or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmium. (See legal e)	\boxtimes		
P2.3*	Batteries	and accumulators are readily removable. (See legal reference)	\boxtimes		
P3	Conforn	nity verification & Eco design (ErP)			
P3.1*	The Dec	duct is CE-marked to show conformance with applicable legal requirements (see legal reference). Identifying the conformation of Conformity can be requested at (add link or e-mail address): In the conformation of Conformity can be requested at (add link or e-mail address): In the conformation of Con			
P3.2*		duct complies with the Eco design requirements for energy-related products, al reference).	\boxtimes		
	, ,	d information is; Significantly given in item P15 or added to this document, Significantly available at (add URL):			
	https://v	vww.lenovo.com/us/en/compliance/eco-declaration			
P5		packaging			
P5.1*	Packagii	ng and packaging components do not contain more than 0,01% lead, mercury, cadmium and ent chromium by weight of these together.	d 🔀		

The packaging materials are marked with abbreviations and numbers indicating the nature of the material(s)

The product packaging material is free from ozone depleting substances as specified in the Montreal Protocol

P5.2*

P5.3*

P6

P6.1*

used (see legal reference).

Treatment information

(see legal reference).

Comment: Legal reference has no maximum concentration values.

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 *	21AS, 82Q6	Logo	Lanova
Issue date *	2022/5/9		Leliovo

				-
Produc	t environmental attributes - Market requirements (See General NOTE GN below) - Environmental conscious design	Require	ment	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	\boxtimes		
P7.2*	Plastic materials in covers/housing have no surface coating.		\boxtimes	
P7.3*	Plastic parts > 100 g consist of one material or of easily separable materials.			\boxtimes
P7.4*	Plastic parts > 25 g have material codes according to ISO 11469 referring ISO 1043-4.	\boxtimes		
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).	\boxtimes		
	Product lifetime			
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives	\boxtimes		
P7.8*	Upgrading can be done using commonly available tools	\boxtimes		
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):)			
57.40	Material type: PC+ABS Material type: PC+ABS			
P7.12	Insulation materials of external electrical cables are PVC free.			
P7.13	Insulation materials of internal electrical cables are PVC free.	X		
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, an 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.	d		
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 1NOTE B2)	n 🗵		
P7.16	Flame retarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4: Marking: 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: DOPD, CAS #: 35948-25-5			
	Alt. 2: Chemical specifications of flame retardants in printed circuit boards (without components) > 25 g according ISO 1043-4:			
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: Carbonic dichloride, polymer with 4,4-(1-methylethylidene)bisphenol, CAS #:	n 🖂		
	25971-63-5 (See NOTE B4) 2. Chemical name: , CAS #: " 3. Chemical name: , CAS #: "			
P7.19	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; and Hazard statements: H411;H413	\boxtimes	Ш	Ш
	The source(s) for these classifications is/are found at (add URL(s)): , (See note B5)			
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 5.65%. or			
	b) The weight of recycled material is 5.3g			

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 *	21AS, 82Q6	Logo	Lanava
Issue date *	2022/5/9		Lei IOVO.

Product environmental attributes - Market requirements (continued)	Requir	remen	t met
Item	Yes	No	n.a.

D7 04*		stance requirements				
P7.21*	Biobased plastic m	naterial content is used	I in the product (See NO	DIEB/):		\boxtimes
	a) Of total plastic		es below shall be answe the biobased plastic ma		ed as a percentage of	
	or					
P7.22*		the biobased plastic r	naterial is g. less than 0,1 mg/lamp.		\square	$\overline{}$
1.22		specify: Number of lar		um mercury content pe	r lamp: mg	Ш
P8	Batteries	1 7	•	,	<u> </u>	
P8.1*	Battery chemical c	omposition: Lithium I	on/Lithium Manganes	e Dioxide		
P9		tion (See NOTE B8)				
P9.1			s or energy consumption		Defended for a second	_
Energy mo		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 *	Ш
Peak (On-	max)	65 W	65 W	65 W	Full load	
Categor	<u>y 2</u>					
Short Idle Enabled	State - WOL	7.332 W	7.452 W	7.596 W	ENERGY STAR Computers V8 (P _{idle})	
Long Idle Enabled	State - WOL	5.412 W	5.652 W	5.736 W	ENERGY STAR Computers V8 (P _{idle})	
Sleep (S3)	- WOL Enabled	1.656 W	1.704 W	1.764 W	ENERGY STAR Computers V8(P _{sleep})	
Off (S5) - V	WOL Enabled	0.516 W	0.528 W	0.54 W	ENERGY STAR Computers V8(Poff)	
EPS No-loa (External power s wall outlet but disc	ad supply / charger plugged in the connected from the product.)	0.13 W	0.13 W	0.13 W		
ETEC *(1)	ergy Consumption	30.22 Wh/year	30.92kWh/year	31.58 kWh/year	E _{TEC} = (8760/1000) x (P _{off} x 0.25 + P _{sleep} x 0.35 + P _{long_idle} x 0.10+ P _{short_idle} x 0.30)	
					d; P _{idle} : Idle State - WOL Enabled	L
		,	Efficiency Marking Pro	tocol) * : V/		
. ,	solution * : 4.096 me	<u> </u>				
	e to enter energy sa	ve mode: 30 minutes				
P9.2*		0,	on is provided with the	product.		
P9.3	Energy efficiency of	class (monitors only):				\boxtimes
P10	Emissions					
D40.4			ISO 9296 (See NOTE		t A visiglete d sound noview level / //	D)
P10.1		lode description		* 1.7	t A-weighted sound power level, $L_{WA,c}$ (D)
		Operating (CPU)		* 3.1		\dashv
			d pressure level (dB) $L_{p{\sf Am}}$	20.4 (operator posit	ion deskton – idle)	
	Other mode	eclared A-weighted soun	d pressure level (dB) $L_{p m Am}$	1.7	ion desktop – rule)	
				33.2 (operator posit	ион иеѕктор – орегайнд)	
	Measured according	ng to: X ISO 7779 X	ECMA-74	FCMA-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 nur	nber *	21AS, 82Q6			Logo	Long		
Issue date	*	2022/5/9				Leno	VO.	*
Product	environr	nental attributes	- Market requirements (co	ntinued)		Require	ment	met
Item			•	•		Yes	No	n.a.
	Electron	nagnetic emissions						
P10.4		er display meets the (s): MPR-II(3 pin AC	requirement for low frequency e	electromagnetic fields	of the following voluntar	y 🔀		
P12		mics for computing						
P12.1*	The disp	lay meets the ergon	omic requirements of ISO 9241	-307 for visual display	y technologies.	\boxtimes		
P12.2*	The phy	sical input device me	ets the requirements of ISO 99	95 and ISO 9241-410).	\boxtimes		
P13		ng and documenta						
P13.1*	Product	packaging material t	ype(s): Paper - Corrugated Sii ype(s): EPE Foam weight (k ype(s): Plastic - PES		g): 0.309			
P13.2*			aging is free from PVC.	<u> </u>		\boxtimes		
P13.3*		duct primary corrugater recovered fiber co	ited fiberboard packaging, spentent: 80 %	cify the contained p	ercentage of minimum p	oost-		
P13.4*	Specify	media for user and p ronic, ⊠Paper, □	roduct documentation (tick box)):				
P13.5	(Please User and	only complete this ite	em if paper documentation used tion on paper media is chlorine					
	Element	hlorine-free al chlorine-free ed chlorine-free						
P14	Volunta	ry programs						
P14.1			ements of the following volunta	ry program(s):				
	ENERG EPEAT	Y STAR®	Criteria version: <i>V8.0</i> Criteria version: <i>IEEE Std</i> 1680.1-2009	Date: 2021/12/16 Date: 2022/2/24	Product category: 2 Product category:			
P15		nal information (See						
P9			ecific configuration may vary					
	the info supplied informa	rmation contained in r's knowledge avail tion. The information	representations, guarantees, in this document. All informat able at the time of completion provided here is approximate more information.	tion provided by sup n, and supplier shall	oplier in this document I have no obligation to t	is provided update such	based	on
P9	See Ene	ergy Star Qualified I	Notebooks & Tablet Compute Index.cfm?fuseaction=find a					
	nup://W	ww.energystar.gov/	muex.cim/ruseaction=find_a	_product.snowProd	iuciGroup&pgw_code=			

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 13s G4 ARB / Lenovo K3-ARB	Logo	
Model Number	21AS, 82Q6		Lonovo
Issue Date	2022/5/9		Lenovo.
Additional information			

d)	year of manufacture:				2022
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	y and capability adjust	ments applied when a	all discrete graphics	cards (dGfx) are
		Category A	Category B	Category C	Category D (according to ErP Lot 3)
	Memory over base [GB]	32			
ents	Additional internal storage	No (Yes / No)	(Yes / No)	(Yes / No)	(Yes / No)
capability adjustments applied during testing	Discrete television tuner	No (Yes / No)	(Yes / No)	(Yes / No)	(Yes / No)
ability a lied du	Discrete Audio Card	No (Yes / No)	(Yes / No)	(Yes / No)	(Yes / No)
capa appl	Discrete graphics Card(s) [number / #]	No #: (Yes / No)	#: (Yes / No)	#: (Yes / No)	#: (Yes / No)
	Category of discrete graphics Card(s)				
saults	Etec Value (kWh) - dGfx disabled all discrete graphics cards (dGfx) are disabled/ UMA is active for switchable graphics/ product has no graphics cards (dGfx)	18.45			
Test results	Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled				
3)	Idle state power demand (Watts);	•		•	5.74
1)	Sleep mode power demand (Watts);				1.72
)	Sleep mode with WOL enabled power de	emand (Watts) (where	enabled);		1.72
)	Off mode power demand (Watts);				0.35
k)	Off mode with WOL enabled power dem	and (Watts) (where en	abled);		0.35
)	Internal power supply efficiency at 10 %,	20 %, 50 % and 100 °	% of rated output pow	er (if applicable):	
	10% 20% 50%	100% Avera	ige		
n)	external power supply efficiency (if applie	cable)*:			
	Average active efficiency: 89.5% meet Le	evel VI			
))	*internal note: show values for all available external po Minimum number of loading cycles that t		tand (applies only to n	otebook computers):	300 cycles
p-1)	Measurement methodology used to dete	rmine information men	tioned in points (I) – ir	nternal PSU efficiency	<u> </u>

(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 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 for achieving a stable condition with respect to power demand::			
Power on -> Wait 5 minutes -> Stable condition			
(r) Description of how sleep and/or off mode was selected or programmed:			
Begin menu -> Power -> Select sleep or off mode			
(s) Sequence of events required to reach the mode where the equipment automatically changes to sleep and/or off mode: <i>NA</i>			
	Duration of idle state condition before the computer automatically reaches sleep mode, or another condition which does not exceed the applicable power demand requirements for sleep mode (in minutes):		
 Length of time after a period of user inactivity in which the computer automatically reaches a power mode that has a lower power demand requirement than sleep mode (in minutes): 			N/A
(v) Length of time before	Length of time before the display sleep mode is set to activate after user inactivity (in minutes):		
(w) Information on the energy-saving potential of power management functionality:			
Refer to User Guide			
(x) user information on how to enable the power management functionality:			
Refer to User Guide			
(z) test parameters for measurements: — test voltage in V and frequency in Hz, — total harmonic distortion of the electricity supply system, — information and documentation on the instrumentation, set-up and circuits used for electrical testing:			
230V50HZ-2%-Edition 2.0, 2011-01, Section 4, IEC62301			
Additional Notebook Battery Information:			
	Battery[ies] <u>not</u> user replaceable	Battery[ies] user replaceable	n/a
	The battery[ies] in this product cannot be easily replaced by users themselves. 1)		
Internal/built-in Battery			
External/detachable Battery			
Bios Backup Battery			
Other:			
Additional information			
)			

Акумулаторната[ите] батерия[и] в този продукт не може да се замени[ят] лесно от самите потребители. Las baterías de este producto no pueden ser sustituidas fácilmente por los propios usuarios. Výměnu baterie/baterií v tomto výrobku by neměli provádět sami uživatelé.

Brugeren kan ikke uden videre udskifte batteriet/batterierne i dette produkt.
Der Akku/die Akkus dieses Produkts kann/können nicht ohne weiteres vom Benutzer selbst ausgetauscht werden.

Kasutajad ei saa selle toote akut/akusid ise hõlpsasti asendada.

Η μπαταρία[-ες] στο προϊόν αυτό δεν μπορούν να αντικατασταθούν εύκολα από τους ίδιους τους χρήστες La/les batterie(s présente(s) dans ce produit ne peuvent être facilement remplacée(s) par les utilisateurs eux-mêmes.

Korisnik ne može lako zamijeniti Bateriju sam u ovom proizvodu.

La batteria/le batterie in questo prodotto non può/possono essere facilmente sostituita/e dall'utente. Lietotāji paši nevar nomainīt šā ražojuma akumulatoru(-us). Šio gaminio baterijos [bateriju] pats vartotojas negali lengvai pakeisti. A termék akkumulátorati ta felhasználó nem tudja egyedül egyszerűen kicserélni. Il-batterija/batteriji fdan il-prodott ma tistax/jistgħux tiġi/jiġu sostitwita/i mill-utenti stess. Batteriet [ene] i dette produktet kan ikke lett erstattes av brukerne selv.

De batterij(en) in dit product is (zijn) door de gebruiker niet gemakkelijk vervangbaar. Użytkownik nie może sam w łatwy sposób wymienić baterii w tym produkcie. A ou as baterias deste produto não podem ser facilmente substituídas pelos próprios utilizadores.

Bateria (bateriile) din acest produs nu poate (pot) fi uşor înlocuită (înlocuite) de utilizatorii înşişi. Batériu(-ie) v tomto výrobku nemôže vymieñať používateľ.

Baterij/baterije v tem izdelku uporabniki sami ne morejo zlahka zamenjati.

The battery[ies] in this product cannot be easily replaced by users themselves.

Tämän tuotteen akku [akut] ei[vät] ole helposti käyttäjän vaihdettavissa. Det är inte enkelt för kunden att själv byta ut batteriet/batterierna. Bu üründeki batarya(lar) kullanıcılar tarafından kolaylıkla değiştirilemez.