



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 *	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 statements given in this declaration.					
Type of product *	Notebook					
Commercial name *	Lenovo ThinkBook Plus					
Model number *	20TG					
Issue date *	2020-3-9					
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 *	20TG	Logo	Lon		
Issue dat	te *	2020-3-9		Lend		J _{tm}
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.		\boxtimes		
P1.3*		s do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC),		\boxtimes		
	hydrobro trichloro	omofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrach ethane, methyl bromide (see legal reference). Comment: Legal reference has no mation values.				
P1.4*		s do not contain more than; $0,005\%$ polychlorinated biphenyl (PCB), $0,005\%$ polych ℓ l (PCT) in preparations (see legal reference).	lorinated			
P1.5*		s do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 cart ntaining at least 48% per mass of chlorine in the SCCP (see legal reference).	oon atoms in the	e 🔀		
P1.6*	(see lega	th direct and prolonged skin contact do not release nickel in concentrations above 0 al reference). nt: Max limit in legal reference when tested according to EN1811:2011-5.	,5 μg/cm²/week	(
P1.7*		Article 33 information about substances in articles is available at (add URL or mail	contact).		$\overline{}$	
1 1.7		ww.lenovo.com/us/en/Lenovo-REACH-SVHC-Disclosure	Jonaci).		ш	
P2	Batterie					
P2.1*		oduct contains a battery or an accumulator, the battery/accumulator is labeled with t	he disposal		$\overline{}$	
		Information on proper disposal is provided in user manual. (See legal reference)			ш	ш
P2.2*	Batteries referenc	s or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadme)	iium. (See lega	I 🔀		
P2.3*	Batteries	s and accumulators are readily removable. (See legal reference)		\boxtimes		
P3	Conform	nity verification & Eco design (ErP)				
P3.1*	The prod	duct is CE-marked to show conformance with applicable legal requirements (see leg	gal reference).	X		
		laration of Conformity can be requested at: https://www.lenovo.com/us/en/complian	ice/eu-doc			
P3.2*		duct complies with the Eco design requirements for energy-related products, al reference).				
	Required	d information is; given in item P15 or added to this document,				
		available at: https://www.lenovo.com/us/en/compliance/e	eco-declaration			
P5	Product	packaging				
P5.1*	Packagii	ng and packaging components do not contain more than 0,01% lead, mercury ent chromium by weight of these together.	/, cadmium an	d 🔀		
P5.2*	The pac	kaging materials are marked with abbreviations and numbers indicating the nature (see legal reference).	of the material(s	s) 🔀		
P5.3*		duct packaging material is free from ozone depleting substances as specified in the N	Nontreal Protoc	ol 🔀	\Box	
	(see lega	al reference).				
-		nt: Legal reference has no maximum concentration values.				
P6		nt information			_	
P6.1*	ıntormatı	on for recyclers/treatment facilities is available (see legal reference).		\square		

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 *	20TG	Logo	Lanava
Issue date *	2020-3-9		Lei IOVO.

Product	environmental attributes - Market requirements (See General NOTE GN below)			
		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.	\boxtimes		
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):			
	Material type: PC/ABS Material type: AL Material type:			
P7.12	Insulation materials of external electrical cables are PVC free.		\boxtimes	
P7.13	Insulation materials of internal electrical cables are PVC free.		\boxtimes	
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 haloge 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: >PC+ABS-TD15FR(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: Brominated epoxy resin. CAS #: 26265-08-7			
	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 is concentrations above 0,1%: 1. Chemical name: BPADP, CAS #: 181028-79-5 (See NOTE B4) 2. Chemical name: , CAS #: " 3. Chemical name: , CAS #: "	in 🖂		
	Alt. 2: Chemical specifications of flame retardants in plastic parts > 25 g according ISO 1043-4:			\square
P7.19	In plastic parts > 25 g, flame retardant substances/preparations above 0,1% are used which have been		Ħ	
	assigned the following Risk phrases; and Hazard statements:			
	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):	\boxtimes		
	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 1.9%. or b) The weight of recycled material is 3.1 g.	_	_	

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 *	20TG	Logo	Lonovo
Issue date *	2020-3-9		Leilovo

Product environmental attributes - Market requirements (continued)	Requi	remer	nt met
Item	Yes	No	n.a.

	Material and sub	stance requirements	(continued)			
P7.21*			in the product (See No	OTE B7):		
		ic parts' weight > 25 g,	es below shall be answe the biobased plastic m		ted as a percentage of	
		f the biobased plastic r	material is g.			
P7.22*		free from mercury, i.e. specify: Number of lar	less than 0,1 mg/lamp.	um mercury content pe	r lamp: mg	
P8	Batteries					
P8.1*	Battery chemical of	composition: Lithium i	on			
P9		tion (See NOTE B8)				
P9.1	•	· · · · · · · · · · · · · · · · · · ·	s or energy consumption		T=	
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 *	
Peak (On-I	max)	65 W	65 W	65 W	Full load	
Categor	<u>y 11-</u>					
Short Idle Enabled	State - WOL	4.4 W	4.4 W	4.5 W	Use for ENERGY STAR V8.0 registration (Pidle)	
Long Idle Enabled	State - WOL	1.8 W	1.8 W	1.9 W	Use for ENERGY STAR V8.0 registration (Pidle)	
Sleep (S3)	- WOL Disabled	0.8 W	0.8 W	0.8 W	Use for ENERGY STAR V8.0 registration(P _{sleep})	
Off (S5) - V	WOL Disabled	0.43 W	0.43 W	0.45 W	Use for ENERGY STAR V8.0 registration(P _{off})	
EPS No-loa (External power s wall outlet but disc	ad supply / charger plugged in the connected from the product.)	0.04 W	0.04 W	0.1 W		
PTEC * Typical Ene	ergy Consumption	22.6 W	22.6 W	22.6 W		
ETEC * Annual Ene	ergy Consumption	15.4 kWh/year	15.42 kWh/year	15.46 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)	
		Poff: Off Mode(S5) - Wo	OL Enabled; P _{sleep} : Sleep	Mode(S3) - WOL Enable	d; Pidle: Idle State - WOL Enabled	
External Po	ower Supply Efficier	ncy Level (International	Efficiency Marking Pro	otocol) * : VI		
Display res	solution * : 1920*10	80megapixels				
Default time	e to enter energy sa	ave mode: 30 minutes				T
P9.2*	Information about	the energy save functi	on is provided with the	product.	·	$\overline{\boxtimes}$
P9.3	Energy efficiency	class (monitors only):				X
P10	Emissions					
			ISO 9296 (See NOTE			
P10.1		Mode description			A-weighted sound power level, $L_{WA,c}$	(B)
		System Idle: Fan		* 16.7		<u></u>
	Operation *	Operation: Fan		* 29.8		
			d pressure level (dB) $L_{p m Am}$		sition desktop – idle)	
			d pressure level (dB) $L_{p{\sf Am}}$	(operator pos	sition desktop – operating)	
	Measured accordi	ng to: 🔀 ISO 7779 🗌	ECMA-74			
I		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 nun	nber *	20TG					Logo	Leno	M	
Issue date	*	2020-3-9						Leno	VO.	н
Product 6	environn	nental attributes	- Market requireme	ents (continued	l)			Require	ment	met
Item			-					Yes	No	n.a.
		nagnetic emissions								
P10.4	Compute program		requirement for low fre	equency electroma	agnetic fields	of the follo	wing voluntary	у		
P12		nics for computing								
P12.1*	The disp	lay meets the ergon	omic requirements of IS	SO 9241-307 for	visual display	/ technologi	es.	\boxtimes		
P12.2*	The phys	sical input device me	ets the requirements o	of ISO 9995 and I	SO 9241-410).				
P13		ng and documenta								
P13.1*	Product	packaging material t packaging material t packaging material t	ype(s): <i>paper</i> v	weight (kg): 0.304 weight (kg): 0.008 weight (kg): 0.07 3	}					
P13.2*	Product p	plastic primary packa	aging is free from PVC.					\boxtimes		
P13.3*		luct primary corruga er recovered fiber co	ited fiberboard packag ntent: 90 %	ging, specify the	contained pe	ercentage o	of minimum p	ost-		
P13.4*			roduct documentation (Other	(tick box):						
P13.5	Ùser and		em if paper documenta ition on paper media is							
	•	hlorine-free al chlorine-free								
	Processe	ed chlorine-free								
P14	Voluntai	ry programs								
P14.1	The prod	luct meets the requir	rements of the following	g voluntary progra	am(s):					
	ENERGY Eco-labe Eco-labe		Criteria version: 8.0 Criteria version: Criteria version:	Date: Date: Date:	2020-2-07	Product ca Product ca Product ca	tegory:			
P15		nal information (See								
P9			ecific configuration m							
	informati knowledg provided informati	on contained in this ge available at the til here is approximate on.	presentations, guarant document. All informati me of completion, and and provided for information	tion provided by s supplier shall hav mational purpose	upplier in this re no obligations s only. See a	document on to update Lenovo Ac	is provided be such inform	ased on suppation. The inf	lier's ormati	on
P9			otebooks & Tablet Com dex.cfm?fuseaction=fin				ode=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	Lenovo ThinkBook Plus	Logo
Model Number	20TG	Longvo
Issue Date	2020-3-9	Lenovo
Additional information		

d)	Year of manufacture:				2018	
e) f)	Etec value (kWh) per ErP Lot 3 Catego disabled and if the system is tested with Etec value (kWh) per ErP Lot 3 Categor	switchable graphics n	node with UMA driving	the display.	, ,	
	enable	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]	16GB	,			
ents ting	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	Discrete Audio Card	NO (Yes / No)	(Yes / No)	(Yes / No)	(Yes / No)	
cap	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)					
Test results	Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled	14.5				
g)	Idle state power demand (Watts);		l	l	4.3	
h)	Sleep mode power demand (Watts);				1.8	
i)	Sleep mode with WOL enabled power de	emand (Watts) (where	enabled);			
j)	Off mode power demand (Watts);				0.43	
k)	Off mode with WOL enabled power dem	and (Watts) (where en	abled);			
l)	Internal power supply efficiency at 10 %,	20 %, 50 % and 100 °	% of rated output power	er (if applicable):		
	10% 20% 50%	100% Avera	age			
m)	External power supply efficiency (if appli	cable)*:				
	Average active efficiency: 85.93%, 88.					
(o)	*internal note: show values for all available external power supplies Minimum number of loading cycles that the batteries can withstand (applies only to notebook computers): 300					
p-1)	Measurement methodology used to dete	rmine information mer	ntioned in points (I) – ir	nternal PSU efficiency:		

(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:	
Power on -> Wait 5 minutes -> Stable condition	
(q) Sequence of steps for achieving a stable condition with respect to power demand: **Begin menu -> Power -> Select sleep or off mode**	
(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:	
NA NA	
condition which does not exceed the applicable power demand requirements for sleep mode (in minutes):	0min
(u) 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):	NA
	0min
(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:	
	ı/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	

1)
The battery[ies] in this product cannot be easily replaced by users themselves.
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 akkumulátorát/akkumulátorait a felhasználó nem tudja egyedül egyszerűen kicserélni.

Il-batterija/batteriji f'dan 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 ușor înlocuită (înlocuite) de utilizatorii înșiși.

Batériu(-ie) v tomto výrobku nemôže vymieňať používateľ. Baterij/baterije v tem izdelku uporabniki sami ne morejo zlahka zamenjati.

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.