



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	Lancing and the second		
Contact information *	Lenovo Global Environmental Affairs	ODOVO		
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Internet site *	https://www.lenovo.com/us/en/about/sustainability			
Additional information	e 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 statemen	nts given in this declaration.					
Type of product * Notebook						
Commercial name *	ThinkPad T15 Gen 2, ThinkPad P15s Gen 2					
Model number *	20W4, 20W5, 20W6, 20W7					
Issue date *	2020/12/21					
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	mber *	20W4, 20W5, 20W6, 20W7	Logo	Christ	en 16 m. e	
Issue date	e *	2020/12/21		Lend	ovo	_
	environ	mental attributes - Legal requirements		Require		met
Item	-			Yes	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)	\boxtimes		
P1.2*		do not contain Asbestos (see legal reference).				
		nt: Legal reference has no maximum concentration value.				
P1.3*		s do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), omofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrach		\boxtimes		
	trichloroethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum concentration values.					
P1.4*		ation values. s do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polych	lorinated		$\overline{}$	
1 1.4		I (PCT) in preparations (see legal reference).	Office		Ш	
P1.5*		s do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carb	on atoms in t	the 🔀		
	chain co	ntaining at least 48% per mass of chlorine in the SCCP (see legal reference).				
P1.6*		th direct and prolonged skin contact do not release nickel in concentrations above 0	,5 μg/cm²/we	ek 🔀		
		al reference).				
		nt: Max limit in legal reference when tested according to EN1811:2011-5.				
P1.7*		Article 33 information about substances in articles is available at (add URL or mail	contact):			
	<u> </u>	ww.lenovo.com/us/en/Lenovo-REACH-SVHC-Disclosure				
P2	Batterie	S				
P2.1*		oduct contains a battery or an accumulator, the battery/accumulator is labeled with t	he disposal			
		Information on proper disposal is provided in user manual. (See legal reference)				
P2.2*		or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadm	ium. (See leg	jal 🔀		
D0 0*	referenc				_	
P2.3*		and accumulators are readily removable. (See legal reference)			Ш.	Ш
P3		nity verification & Eco design (ErP)				
P3.1*		duct is CE-marked to show conformance with applicable legal requirements (see leg		. 🖂		
	The Dec	laration of Conformity can be requested at: https://www.lenovo.com/us/en/complian	ce/eu-doc			

given in item P15 or added to this document,
available at: https://www.lenovo.com/us/en/compliance/eco-declaration

The product complies with the Eco design requirements for energy-related products,

Packaging and packaging components do not contain more than 0,01% lead, mercury, cadmium and

The packaging materials are marked with abbreviations and numbers indicating the nature of the material(s) used (see legal reference).

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

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.

P3.2*

P5

P5.1

P5.2*

P6

P6.1*

(see legal reference).

Product packaging

Required information is;

Treatment information

hexavalent chromium by weight of these together.

(see legal reference).

Comment: Legal reference has no maximum concentration values.

Information for recyclers/treatment facilities is available (see legal reference).

Model number *	20W4, 20W5, 20W6, 20W7	Logo	Lonovo
Issue date *	2020/12/21		Lei 1000

Droduct	Product environmental attributes - Market requirements (See General NOTE GN below)						
Troduct		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						
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: PPS+50%GF Material type: PC+ABS Material type: PA+50%	GF					
P7.12	Insulation materials of external electrical cables are PVC free.		X				
P7.13	Insulation materials of internal electrical cables are PVC free.						
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, and 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 Z					
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)	\boxtimes					
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: Phosphorus Modified Epoxy Resin, CAS #: Confidential						
	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: Phosphorus compounds, CAS #: Confidential (See NOTE B4) 2. Chemical name: , CAS #: " 3. Chemical name: , CAS #: "	n 🗵					
	Alt. 2: Chemical specifications of flame retardants in plastic parts > 25 g according ISO 1043-4:						
P7.19	In plastic parts > 25 g, flame retardant substances/preparations above 0,1% are used which have been assigned the following Risk phrases; <i>R36</i> , <i>R38</i> and Hazard statements: <i>H319</i> , <i>H315</i> The source(s) for these classifications is/are found at (add URL(s)): https://www.msds-europe.com/r-phrases-s-phrases/ , https://www.msds-europe.com/r-phrases-s-phrases/ , https://www.msds-europe.com/h-statements/ (See note B5) 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 2.2%. or b) The weight of recycled material is 16.2 g.	<u>~</u>					

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 *	20W4, 20W5, 20W6, 20W7	Logo	Len	27/0		
Issue date *	2020/12/21		Leil	JVC	-	
Product environn	Product environmental attributes - Market requirements (continued) Requirement me					
Item			Yes	No	n.a.	

P7.21*		stance requirements naterial content is used	(continued) I in the product (See NO	OTE B7):			
	a) Of total plasti	c parts' weight > 25 g,	es below shall be answe the biobased plastic m		ted as a percentage of		
	total plastic b or	y weight) is %.					
		the biobased plastic r					
P7.22*		ree from mercury, i.e. specify: Number of lar	less than 0,1 mg/lamp. nps: and maximu	um mercury content per	r lamp: mg	Ш	
P8	Batteries				* * * * * * * * * * * * * * * * * * * *		
P8.1*	Battery chemical c	•					
P9		tion (See NOTE B8)					
P9.1			s or energy consumption		D-f		
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	nax)	65 W	65 W	65 W	Full load		
Category	<u>v 2</u>						
Short Idle Enabled	State - WOL	5.15 W	5.17 W	5.35 W	Use for ENERGY STAR V8 registration (P _{idle})		
Long Idle State - WOL Enabled		1.78 W	1.80 W	1.90 W	Use for ENERGY STAR V8 registration (P _{idle})		
Sleep (S3)	- WOL Enabled	1.78 W	1.80 W	1.90 W	Use for ENERGY STAR V8 registration (P _{sleep})		
Sleep (S3)	- WOL Disabled	1.52 W	1.56 W	1.53 W	Reference		
Off (S5) - V Enabled/D		0.30 W	0.31 W	0.42 W	Use for ENERGY STAR V8 registration, Use fo rErP (Poff)		
EPS No-loa (External power s	ad upply / charger plugged in the connected from the product.)	0.10 W	0.10 W	0.12 W			
PTEC *		W	W	W			
ETEC *	ergy Consumption	19.76 kWh/year	19.87 kWh/year	20.97 kWh/year	$E_{TEC} = (8760/1000) \times (P_{off} \times 0.25)$		
	ergy Consumption	70.70 KWII/you	70.07 KVVIII/yodi	20.07 KWII/yodi	+ P _{sleep} x 0.35 + P _{long_Idle} x 0.10+ P _{short_Idle} x 0.30)		
					d; P _{idle} : Idle State - WOL Enabled		
External Po	wer Supply Efficier	icy Level (International	l Efficiency Marking Pro	tocol) * : VI			
Display res	olution * : 8.29 meg	japixels					
Default time	e to enter energy sa	ive mode: 10 minutes					
P9.2*	Information about	the energy save functi	on is provided with the	product.			
P9.3	Energy efficiency	class (monitors only):				\boxtimes	
P10	Emissions				1		
			ISO 9296 (See NOTE				
P10.1		Mode description			A-weighted sound power level, $L_{WA,c}$	(B)	
	.	HDD idle		* 2.7		Щ	
	Operation *	Operating (HDD) Operating (CPU)		* 4.0 * 4.0		Н	
	Other mode	Peclared A-weighted soun	d pressure level (dB) $L_{p{\sf An}}$	18 (operator position desktop – idle)			
			d pressure level (dB) $L_{p m Am}$		n desktop – operating HDD) n desktop – operating CPU)		
	Measured according	ng to: X ISO 7779 X Other	ECMA-74 (only if not covered by	ECMA-74)			
i	Other (only if not covered by Lowin-1-1)						

NOTE B7 The following is to be excluded from the calculation of percentage: printed circuit boards, labels, cables, connectors and electronic components and postconsumer recycled plastic

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 number *		20W4, 20W5, 20W	6, 20W7		Logo	one	1/0	Ā
Issue date	*	2020/12/21				_eno	VO	
Product 6	environn	nental attributes	- Market requirements (cor	ntinued)		Require	ment	met
Item			-			Yes	No	n.a.
	Electron	nagnetic emissions				·	•	
P10.4	program	(s): MPŘ-II(3 pin AC		lectromagnetic fields	of the following voluntary			
P12		nics for computing						
P12.1*			omic requirements of ISO 9241-			\boxtimes		
P12.2*	The phys	The physical input device meets the requirements of ISO 9995 and ISO 9241-410.						
P13		ng and documenta						
P13.1*	Product Product Product	packaging material t	ype(s): Acc BOX weight (kg ype(s): EPE cushion weight (kg ype(s): LDPE Bag weight (kg):				
P13.2*	Product	Product plastic primary packaging is free from PVC.						
P13.3*	For product primary corrugated fiberboard packaging, specify the contained percentage of minimum post-consumer recovered fiber content: 65 %							
P13.4*		media for user and p ronic, Paper,	roduct documentation (tick box): Other					
P13.5	Ùser and		em if paper documentation used tion on paper media is chlorine-					
	Elementa	hlorine-free al chlorine-free ed chlorine-free						
P14	Volunta	ry programs						
P14.1	The prod	luct meets the requir	ements of the following voluntar	y program(s):				
	Eco-labe Eco-labe	l: TCO	Criteria version: V8 Criteria version: 1680.1-2018 Criteria version: Ver.13 Criteria version: Gen 8	Date: 2020/12/21 Date: 2021/2/26 Date: 2021/2/26 Date: 2020/3	Product category: 2 Product category: Notebook Product category: Notebook Product category: Notebook	ok .		
P15		nal information (See						
P9			ecific configuration may vary;					
	informati knowled	on contained in this ge available at the til here is approximate	presentations, guarantees, assu document. All information provid me of completion, and supplier s and provided for informational p	led by supplier in this hall have no obligati	s document is provided base on to update such informatio	ed on supp on. The inf	lier's ormat	ion
P9			otebooks & Tablet Computers fo dex.cfm?fuseaction=find_a_proc					

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	ThinkPad T15 Gen 2, ThinkPad P15s Gen 2	Logo
Model Number	20W4, 20W5, 20W6, 20W7	Longvo
Issue Date	2020/12/21	Lenovo
Additional information		

d)	Year of manufacture:				2021
e)	Etec value (kWh) per ErP Lot 3 Catego disabled and if the system is tested with				cards (dGfx) are
)	Etec value (kWh) per ErP Lot 3 Categorienable	ry and capability adjust	ments applied when a	all discrete graphics o	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]	44		44	-,
ents	Additional internal storage	No (Yes / No)	(Yes / No)	No (Yes / No)	(Yes / No)
capability adjustments applied during testing	Discrete television tuner	No (Yes / No)	(Yes / No)	No (Yes / No)	(Yes / No)
ability a lied du	Discrete Audio Card	No (Yes / No)	(Yes / No)	No (Yes / No)	(Yes / No)
capa	Discrete graphics Card(s) [number / #]	No #: 0 (Yes / No)	#: (Yes / No)	Yes #: 1 (Yes / No)	#: (Yes / No)
	Category of discrete graphics Card(s)	NA		G4	
sults	Etec Value (kWh) - dGfx disabled all discrete graphics cards (dGfx) are disabled/ UMA is active for switchable graphics/ product has no graphics cards (dGfx)	10.19			
Test results	Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled			10.30	
1)	Idle state power demand (Watts);				A:2.64, C:2.59
1)	Sleep mode power demand (Watts);				A:1.31, C:1.53
1	Sleep mode with WOL enabled power de	emand (Watts) (where	enabled);		A:1.35, C:1.60
)	Off mode power demand (Watts);				A:0.40, C:0.41
:)	Off mode with WOL enabled power dem	and (Watts) (where en	abled);		A:0.40, C:0.41
)	Internal power supply efficiency at 10 %	, 20 %, 50 % and 100 °	% of rated output pow	er (if applicable):	
	10% 20% 50%	100% Avera	age		
n)	External power supply efficiency (if appli	icable)*:			
	Average active efficiency: 45W:87,98%		89,41%,88,62%,88,9	6%	
0)	*internal note: show values for all available external p Minimum number of loading cycles that		tand (applies only to r	notebook computers):	500 cycles
o-1)	Measurement methodology used to determine information mentioned in points (I) – internal PSU efficiency: NA				
p-2)	Measurement methodology used to dete	ermine information mer	ntioned in points (m) –	external PSU efficiend	

(p-3)	Measurement metho	dology used to determine information mentioned in p IEC 61960 measurement methodological				
(p-4)		dology used to determine information mentioned in r Point P9.1 in the Product IT Eco Declaration:	naximum, idle, sleep, off mode			
		EN 62623:2013 measurement methodo	ology			
(q)	Sequence of steps for	or achieving a stable condition with respect to power	demand::			
	EN 62623:2013 measurement methodology					
(r)	Description of how sleep and/or off mode was selected or programmed:					
		EN 62623:2013 measurement methodo	ology			
(s)	Sequence of events required to reach the mode where the equipment automatically changes to sleep and/or off mode:					
	refe	er to power management, 10mins automatically re	eaches sleep mode			
(t)	t) 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):					
(u)	Length of time after	a period of user inactivity in which the compute ver power demand requirement than sleep mode (in	r automatically reaches a power	NA		
(v)		re the display sleep mode is set to activate after		10		
(w)	Information on the er	nergy-saving potential of power management function	nality:			
		refer to user manual				
(x)	User information on I	now to enable the power management functionality:				
		refer to user manual				
(z)		measurements: — test voltage in V and frequency in system, — information and documentation on the in- sting:				
		230V/50HZ, Total Harmonic Distortion	<2%			
Addition	al Notebook Batter	v 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/b	uilt-in Battery					
External/o	detachable Battery					
Bios Bacl	kup Battery					
Other:						
Additiona	l 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 baterias 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 [baterijų] pats vartotojas negali lengvai pakeisti. A termék akkumulátorát/akkumulátorait a felhasználó nem tudja egyedül egyszerűen kicserélni.

II-batterija/batteriji f'dan iI-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.