

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				
Internet site *	https://www.lenovo.com/us/en/about/sustainability				
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 *	ThinkPad P15/P15g			
Model number *	20ST, 20SU, 20UR, 20US			
Issue date *	2020/06/08			
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 n	umber *	20ST, 20SU, 20UR, 20US					
Issue date *		2020/06/08	Leng		D		
Produc	t enviror	mental attributes - Legal requirements	Require		t me		
Item			Yes	No	n.a.		
P1		ous substances and preparations					
P1.1*	Product	s do comply with current European RoHS Directive. (See legal reference and NOTE B1)	\square				
P1.2*		s do not contain Asbestos (see legal reference). nt: Legal reference has no maximum concentration value.	\boxtimes				
P1.3*	hydrobr trichloro	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), hydrobromofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachloride, 1,1,1- trichloroethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum concentration values.					
P1.4*		Products do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlorinated terphenyl (PCT) in preparations (see legal reference).					
P1.5*	Product chain co	e 🔀					
P1.6*	Parts wi (see leg Comme	k 🔀					
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/about/sustainability	\boxtimes				
P2	Batterie	S					
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*	Batterie	s or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmium. (See lega	il 🖂				
P2.3*	Batterie	s and accumulators are readily removable. (See legal reference)	\boxtimes				
P3	Confor	nity verification & Eco design (ErP)					
P3.1*	The pro	duct is CE-marked to show conformance with applicable legal requirements (see legal reference). claration of Conformity can be requested at: https://www.lenovo.com/us/en/compliance/eu-doc	\boxtimes				
P3.2*	The pro	duct complies with the Eco design requirements for energy-related products, al reference).	\boxtimes				
	· · ·	d information is; given in item P15 or added to this document,					
		available at: https://www.lenovo.com/us/en/compliance/eco-declaration					
P5		t packaging					
P5.1*	hexaval	ng and packaging components do not contain more than 0,01% lead, mercury, cadmium ar ent chromium by weight of these together.					
P5.2*	used (se	kaging materials are marked with abbreviations and numbers indicating the nature of the material(ee legal reference).					
P5.3*	(see leg	duct packaging material is free from ozone depleting substances as specified in the Montreal Protoc al reference). nt: Legal reference has no maximum concentration values.	ol 🔀				
P6		ent information					
P6.1*		ion 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 number *		20ST, 20SU, 20UR, 20US	Logo			
Issue dat	te *	2020/06/08		Len	ovc	DIM
Product		mental attributes - Market requirements (See General NOTE GN onmental conscious design	below)	Require	mont	mot
Item		tory to fill in. Additional information regarding each item may be found under P14.		Yes	No	n.a.
P7		Disassembly, recycling		103	110	11.a.
P7.1*	Parts tha	t have to be treated separately are easily separable		\square		
P7.2*	Plastic m	aterials in covers/housing have no surface coating.		<u> </u>		Ē
P7.3*	Plastic pa	arts > 100 g consist of one material or of easily separable materials.			Ē	Ē
P7.4*	Plastic pa	arts > 25 g have material codes according to ISO 11469 referring ISO 1043-4.				Ē
P7.5	Plastic pa	arts are free from metal inlays or have inlays that can be removed with commonly a	available tools.			Ē
P7.6*	Labels a	re easily separable. (This requirement does not apply to safety/regulatory labels).				Ħ
	Product	lifetime				
P7.7*	Upgradin	g can be done e.g. with processor, memory, cards or drives		\boxtimes		
P7.8*	Upgradin	g can be done using commonly available tools		\boxtimes		
P7.9	Spare pa	rts are available after end of production for: 5 years				
P7.10	Service is					
	Material	and substance requirements				
P7.11*	Material	cover/housing material type (e.g. plastics, metal, aluminum): type: PPS+50%GF Material type: PC+ABS Materia	al type:			
P7.12	Insulation	n materials of external electrical cables are PVC free.			\boxtimes	
P7.13	Insulation	n 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, 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.					
P7.15		ircuit boards, PCBs (without components) are low halogen: all ⊠ PCBs > 25 g ⊵ d in IEC 61249-2-21. (See 1NOTE B2)	are low haloge	en 🛛		
P7.16	Flame re Marking:	tarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4: <i>FR(40)</i>		\boxtimes		
P7.17	TBBP	nemical specifications of flame retardants in printed circuit boards > 25 g (without co A (additive), TBBPA (reactive) (See NOTE B3), Other: <i>Phosphorus Modifie</i> confidential		n, 🔀		
		nemical specifications of flame retardants in printed circuit boards (without compone g ISO 1043-4:	ents) > 25 g			
P7.18	concentr 1. Chemi 2. Chemi	ame retarded plastic parts > 25 g contain the following flame retardant substance ations above 0,1%: ical name: Phosphorus compounds , CAS #: confidential (See NOTE B4) ical name: , CAS #: " ical name: , CAS #: "	es/preparations	in 🔀		
		nemical specifications of flame retardants in plastic parts > 25 g according ISO 104	3-4:			
P7.19	assigned	parts > 25 g, flame retardant substances/preparations above 0,1% are used which the following Risk phrases; <i>confidential</i> and Hazard statements: <i>confidential</i>		\square		
			See note B5)			
P7.20*	lfYES;a a) Oft ape or	sumer recycled plastic material content is used in the product (See Note B6): t least one of the two alternatives below shall be answered; otal plastic parts' weight > 25 g, the postconsumer recycled plastic material conten ercentage of total plastic by weight) is 2.02%. weight of recycled material is 16.7 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 *	20ST, 20SU, 20UR, 20US	Logo	Lenovo
Issue date *	2020/06/08		LEIIOVO
Product environ	nental attributes - Market requirements (continued)		Requirement met

Item

Requirement met Yes No n.a.

	Material and sul	bstance requirements	s (continued)			
P7.21*	Biobased plastic	material content is use	ed in the product (See N	OTE B7):		
P7.22*		e free from mercury, i.e d specify: Number of la	e. less than 0,1 mg/lamp. amps: and maxim	um mercury content p	er lamp: mg	
P8	Batteries		•		· · · · · ·	
P8.1*	Battery chemical	composition: Li-ion				
P9		ption (See NOTE B8)				
P9.1			els or energy consumption			
Energy m		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	-max)	230 W	230 W	230 W	Full load	
<u>Catego</u>	<u>ry 2</u>					
Short Idle Enabled	e State - WOL	15.26 W	15.34 W	15.61 W	Use for ENERGY STAR V8 registration (P _{idle})	
Long Idle Enabled	State - WOL	7.85 W	7.92 W	7.34 W	Use for ENERGY STAR V8 registration (P _{idle})	
Sleep (S3) - WOL Enabled		2.97 W	2.97 W	2.83 W	Use for ENERGY STAR V8 registration (P _{sleep})	
Sleep (S3) - WOL Disabled	2.81 W	2.80 W	2.80 W	Reference	
Off (S5) -	WOL Enabled	0.47 W	0.47 W	0.47 W	Use for ENERGY STAR V8 registration (Poff)	
Off (S5) - WOL Disabled		0.45 W	0.46 W	0.45 W	Use for ErP	
EPS No-Ic (External power wall outlet but d	Dad r supply / charger plugged in th isconnected from the product.)	0.10 W	0.10 W	0.09 W		
PTEC *	nergy Consumption	6.52 W	6.55 W	6.53 W		
ETEC *	nergy Consumption	57.12 kWh/year	57.39 kWh/year	57.16 kWh/year	E _{TEC} = (8760/1000) x (P _{off} x 0.25 + P _{sleep} x 0.35 + P _{long_ldle} x 0.10+ P _{short} ldle x 0.30)	
		Poff: Off Mode(S5) - V	VOL Enabled; Psleep: Sleep	Mode(S3) - WOL Enab	led; Pidle: Idle State - WOL Enabled	
External F	Power Supply Efficie	ency Level (Internation	al Efficiency Marking Pro	otocol) * : VI		
Display re	solution * : 8.29(38	40*2160) megapixels				
Default tin	ne to enter energy s	ave mode: 10 minutes	5			
P9.2*	Information abou	t the energy save func	tion is provided with the	product.		
P9.3		v class (monitors only):				
P10	Emissions	. ,				
	Noise emission	- Declared according	to ISO 9296 (See NOTE	B9)		
P10.1		Mode description			nit A-weighted sound power level, $L_{WA,c}$ (B)	
	Idle	* HDD idle		* 2.5		
	Operation	* Operating (HDD) * Operating (CPU)		* 3.3 * 4.0		
	Other mode	Declared A-weighted sou	nd pressure level (dB) L_{pAn}	17 (operator positi	ion desktop – idle)	
	Other mode	Declared A-weighted sou	nd pressure level (dB) L_{pAn}	m 23 (operator position desktop – operatingHDD) 29 (operator position desktop – operatingCPU)		
	Measured accord	ling to: 🔀 ISO 7779	CMA-74 (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 *	20ST, 20SU, 20	UR, 20US		Logo			
Issue dat	:e *	2020/06/08				Leno		н
Product	environ	mental attribut	es - Market requirements (cor	ntinued)		Require	ment	me
Item						Yes	No	n.a
		magnetic emissi						
P10.4	progran	n(s): MPR-II(3 pin	he requirement for low frequency e AC adapter only)	lectromagnetic field	s of the following volu	ntary 🔀		
P12		mics for comput						
P12.1*			onomic requirements of ISO 9241-	•				
P12.2*	The phy	vsical input device	meets the requirements of ISO 999	95 and ISO 9241-41	0.	\square		
P13		ing and docume						
P13.1*	Product	Product packaging material type(s): EPE cushion weight (kg): 0.17 Product packaging material type(s): Carton weight (kg): 0.508 Product packaging material type(s): LDPE weight (kg): 0.022						
P13.2*	Product	plastic primary pa	ackaging is free from PVC.			\boxtimes		
P13.3*			ugated fiberboard packaging, spe content: 70 %(only for Japan)	cify the contained p	percentage of minimu	m post-		
P13.4*	Specify		d product documentation (tick box)	:				
P13.5	Ùser an		s item if paper documentation used entation on paper media is chlorine-			\boxtimes		
	Totally of	chlorine-free				\boxtimes		
		tal chlorine-free						
	Process	ed chlorine-free						
P14	Volunta	ary programs						
P14.1			quirements of the following voluntar	ry program(s):				
	Eco-lab Eco-lab	el: EPEAT el: EPEAT el: TCO el: PCGL	Criteria version: <i>8.0</i> Criteria version: <i>1680.1-2018</i> Criteria version: <i>8.0</i> Criteria version: <i>Ver.13</i>	Date: 2020/6/4 Date: 2020/7/29 Date: 2020/6/4 Date: 2020/7/29	Product category: 2 Product category: N Product category: N Product category: N	otebook		
P15	Additio	nal information (See NOTE B10)					
P9	Energy	consumption of	specific configuration may vary;	description of the	tested product conf	iguration:		
	NOTE: informa knowled	Supplier makes no tion contained in t lge available at th d here is approxim	o representations, guarantees, assu- his document. All information provide e time of completion, and supplier s hate and provided for informational	urances or warrantie ded by supplier in th shall have no obligat	s whether express or is document is provide ion to update such inf	implied, regardin d based on supp ormation. The inf	olier's formati	ion
P9	See En	ergy Star Qualified	d Notebooks & Tablet Computers fo					

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 P15 Gen 1, ThinkPad P15g Gen 1	Logo		
Model Number	20ST, 20SU, 20UR, 20US			
Issue Date	2020/06/08		Lenovo	
Additional information				

P7.1.1	Product environmental attributes					
(d)	Year of manufacture:				2020	
(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 Category and capability adjustments applied when all discrete graphics cards (dGfx) are 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]			128		
lents sting	Additional internal storage	(Yes / No)	(Yes / No)	Yes (Yes / No)	(Yes / No)	
capability adjustments applied during testing	Discrete television tuner	(Yes / No)	(Yes / No)	No (Yes / No)	(Yes / No)	
ability a	Discrete Audio Card	(Yes / No)	(Yes / No)	<mark>No</mark> (Yes / No)	(Yes / No)	
cap app	Discrete graphics Card(s) [number / #]	#: (Yes / No)	#: (Yes / No)	Yes #: 1 (Yes / No)	#: (Yes / No)	
	Category of discrete graphics Card(s)			G7		
Test results	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 r	Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled			20.06		
(g)	Idle state power demand (Watts);	·	•		5.88	
(h)	Sleep mode power demand (Watts);				2.74	
(i)	Sleep mode with WOL enabled power de	emand (Watts) (where	enabled);		2.74	
(j)	Off mode power demand (Watts);				0.42	
(k)	Off mode with WOL enabled power dem	and (Watts) (where en	abled);		0.42	
(I)	Internal power supply efficiency at 10 %, 20 %, 50 % and 100 % of rated output power (if applicable):					
	10% 20% 50%	100% Avera	age			
(m)	External power supply efficiency (if appli	cable)*:				
	Average active efficiency: 91,85%,91,49%					
(0)	*internal note: show values for all available external po Minimum number of loading cycles that t	ower supplies	tand (applies only to p	otobook computora);		
(0)	winimum number of loading cycles that		tand (applies only to n	iolebook computers).	500 Cycles	
(p-1)	Measurement methodology used to dete	rmine information mer NA	ntioned in points (I) – ir	nternal PSU efficiency:		
(p-2)	 Measurement methodology used to determine information mentioned in points (m) – external PSU efficiency: <i>EN 50563:2011 measurement methodology</i> 					

(p-3) Measurement metho	dology used to determine information mentioned in p EN 61960 measurement methodology			
	dology used to determine information mentioned in r Point P9.1 in the Product IT Eco Declaration: EN 62623:2013 measurement methodo			
(q) Sequence of steps for	or achieving a stable condition with respect to power EN 62623:2013 measurement methodo			
(r) Description of how sl refer to power man				
off mode:	required to reach the mode where the equipment au er to power management, 30mins automatically re	, , , ,		
condition which does	te condition before the computer automatically re- s not exceed the applicable power demand requirement r a period of user inactivity in which the compute	ents for sleep mode (in minutes):	30	
	mode that has a lower power demand requirement than sleep mode (in minutes):			
	re the display sleep mode is set to activate after		10	
(w) Information on the er	nergy-saving potential of power management functio refer to user manual	nality:		
(x) User information on I	how to enable the power management functionality: refer to user manual			
	measurements: — test voltage in V and frequency in system, — information and documentation on the in sting: 230V/50HZ, Total Harmonic Distortion	strumentation, set-up and circuits		
Additional Notebook Batter	v 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⁾			
Internal/built-in Battery				
External/detachable Battery			\square	
Bios Backup Battery				
Other:				
Additional information				
as baterías de este producto no pueden s ýměnu baterie/baterií v tomto výrobku by rrugeren kan ikke uden videre udskifte bat ler Akku/die Akkus dieses Produkts kann/ asutajad ei saa selle toote akut/akusid ise l μπαταρία[=cc] στο προϊόν αυτό δεν μπορ a/les batterie(s présente(s) dans ce produ orisnik ne može lako zamijeniti Bateriju sa a batteria/le batterie in questo prodotto no ietotāji paši nevar nomainīt šā ražojuma a io gaminio baterijos [bateriju] pats vartotoj	podyxr не може да се замени[ят] лесно от самите потребите/ er sustituidas fácilmente por los propios usuarios. neměli provádět sami uživatelé. teriet/batterierne i dette produkt. können nicht ohne weiteres vom Benutzer selbst ausgetauscht w hölpsasti asendada. ούν να αντικατασταθούν εύκολα από τους ίδιους τους χρήστες it ne peuvent être facilement remplacée(s) par les utilisateurs eu am u ovom proizvodu. n può/possono essere facilmente sostituita/e dall'utente. kumulatoru(-us).	verden.		