



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	<u> </u>			
Contact information *	Lenovo Global Environmental Affairs	ODOVO			
e-mail address	Alvin L Carter	Lenovo			
	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.	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 *	Portable Computer Tablet				
Commercial name *	Lenovo Smart Tab M8				
Model number *	ZA5C, ZA5D				
Issue date *	2019.10.8				
Intended market *	☐ Global 区 Europe 区 Asia, Pacific & Japan 区 Americas ☐ Other				
Additional information	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 number *		ZA5C, ZA5D	Logo	Lon		
Issue dat	e *	2019.10.8		Lend		J _{tm}
Product	environ	mental attributes - Legal requirements		Require	men	t 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)			
P1.2*		s do not contain Asbestos (see legal reference). nt: Legal reference has no maximum concentration value.				
P1.3*	hydrobro trichloroe	s do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), omofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachlo ethane, methyl bromide (see legal reference). Comment: Legal reference has no ma ration values.				
P1.4*	terpheny	s do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlo d (PCT) in preparations (see legal reference).				
P1.5*		edo not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carbintaining at least 48% per mass of chlorine in the SCCP (see legal reference).	on atoms in the			
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*	REACH	Article 33 information about substances in articles is available at (add URL or mail c ww.lenovo.com/us/en/Lenovo-REACH-SVHC-Disclosure	ontact):			
P2	Batterie	S				
P2.1*	symbol.	duct contains a battery or an accumulator, the battery/accumulator is labeled with the Information on proper disposal is provided in user manual. (See legal reference)	·			
P2.2*	Batteries reference	or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmi	um. (See legal			
P2.3*	Batteries	and accumulators are readily removable. (See legal reference)		\boxtimes		
P3	Conformity verification & Eco design (ErP)					
P3.1*		duct is CE-marked to show conformance with applicable legal requirements (see legal laration of Conformity can be requested at: https://www.lenovo.com/us/en/complianc				
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/ed	co-declaration			
P5	Product	packaging				
P5.1*	Packagir	ng and packaging components do not contain more than 0,01% lead, mercury, ant chromium by weight of these together.	, cadmium an	d 🔀		
P5.2*	The pacl	kaging materials are marked with abbreviations and numbers indicating the nature o e legal reference).	f the material(s	s) 🔀		
P5.3*	The product packaging material is free from ozone depleting substances as specified in the Montreal Protoco (see legal reference). Comment: Legal reference has no maximum concentration values.			ol 🔀		
P6		nt information				
P6.1*	Informati	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 *	ZA5C, ZA5D	Logo	Lanava
Issue date *	2019.10.8		LEI IOVO.

Product	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.	\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		\times	
P7.9	Spare parts are available after end of production for: 2 years			
P7.10	Service is available after end of production for: 2 years			
	Material and substance requirements			
P7.11*	Product cover/housing material type (e.g. plastics, metal, aluminum):			
	Material type: PC+20%GF Material type: PC+ABS Material type: AL5252			
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		\boxtimes	
	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.	9		
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:			\boxtimes
P7.17	Marking: <u>Alt. 1:</u> Chemical specifications of flame retardants in printed circuit boards > 25 g (without components):			
1 7.17	TBBPA (additive), TBBPA (reactive) (See NOTE B3), Other: DOPO, CAS #: 35948-25-5			
	Alt. 2: Chemical specifications of flame retardants in printed circuit boards (without components) > 25 g	\bowtie		
	according ISO 1043-4: <i>FR(40)</i>			
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: PX-200 , CAS #: 139189-30-3 (See NOTE B4)	\boxtimes		Ш
	2. Chemical name: BPADP , CAS #: 181028-79-5			
	Alt. 2: Chemical specifications of flame retardants in plastic parts > 25 g according ISO 1043-4:>PC-	\boxtimes		
	GF20FR40<			
P7.19	In plastic parts > 25 g, flame retardant substances/preparations above 0,1% are used which have been	\boxtimes		
	assigned the following Risk phrases; R43, R22 and Hazard statements: XN The source(s) for these classifications is/are found at (add URL(s)):			
	http://www.molbase.com/en/precursor_139189-30-3-moldata-67767.html,			
	https://www.chemblink.com/MSDS/MSDSFiles/181028-79-5 Clear%20Synth.pdf (See note B5)			
P7.20*	Postconsumer recycled plastic material content is used in the product (See Note B6):		\square	
	, , , , , , , , , , , , , , , , , , , ,			

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 *	ZA5C, ZA5D	Logo	Lonovo
Issue date *	2019.10.8		LEI IOVO,

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

		stance requirements		~== ==·					
P7.21*	Biobased plastic material content is used in the product (See NOTE B7):								
	If YES; at least one of the two alternatives below shall be answered;								
	a) Of total plastic parts' weight > 25 g, the biobased plastic material content (calculated as a percentage of								
	total plastic by weight) is %.								
	or								
	b) The weight of the biobased plastic material is g. Light sources are free from mercury, i.e. less than 0,1 mg/lamp.								
P7.22*									
Do	If mercury is used specify: Number of lamps: and maximum mercury content per lamp: mg								
P8 P8.1*	Batteries Battery chemical composition: <i>Li-ion Polymer</i>								
	· · · · · · · · · · · · · · · · · · ·								
P9		otion (See NOTE B8)	l						
P9.1		Power level at	ls or energy consumption Power level at	Power level at	Reference/Standard for energy				
Energy mo	de "	100 V AC	115 V AC	230 V AC	modes and test method *				
Peak (On-	max)	10 W	10 W	10 W	Full load				
Categor	y2								
Short Idle	State - WOL	1.61 W	1.66 W	1.68 W	Use for ENERGY STAR V7.1				
Enabled					registration (P _{idle})				
	00.0	0.0014/	0.0014/	0.4014/	U. C. FUEDOVOTADAGA				
Enabled	State - WOL	0.22 W	0.22 W	0.18 W	Use for ENERGY STAR V7.1				
Enabled					registration (P _{idle})				
Sleep (S3)	- WOL Disabled	0.22 W	0.22 W	0.18 W	Reference				
Off (S5) - 1	WOL Disabled	0.13 W	0.13 W	0.15 W	Use for ErP				
EPS No-loa	ad	0.0242 W	0.0242 W	0.0326 W					
(External power s	supply / charger plugged in the								
PTEC *	connected from the product.)	W	W	W					
_	ergy Consumption	VV	VV	VV					
ETEC *	ergy Consumption	5.38 kWh/year	5.52 kWh/year	5.48 kWh/year	$E_{TEC} = (8760/1000) \times (P_{off} \times 0.25)$				
_	ergy Consumption	0.30 KWII/yeai	J.JZ KVVII/yeai	3.40 KWII/yeai	$+ P_{sleep} \times 0.35 + P_{long_ldle} \times 0.10+$				
, unidai En	orgy concumption				P _{short_Idle} x 0.30)				
					ed; P _{idle} : Idle State - WOL Enabled				
External Po	ower Supply Efficier	ncy Level (Internationa	l Efficiency Marking Pro	otocol) * : VI					
Display res	solution * : 800*128	0 megapixels							
		ave mode: 1 minutes							
P9.2*			ion is provided with the	product					
P9.3	Information about the energy save function is provided with the product.								
	Energy efficiency class (monitors only):								
P10	P10 Emissions Noise emission – Declared according to ISO 9296 (See NOTE B9)								
P10.1			0 ISO 9296 (See NOTE	,	t A inhte d count of count level / /D)				
P10.1									
				4					
	Operation '	•		^					
	Other mode $\frac{Declared A-weighted sound pressure level (dB)}{L_{pAm}}$ (operator position desktop – idle)				sition desktop – idle)				
	Other mode	Declared A-weighted sour	od pressure level (dB) $L_{p{\sf An}}$	(operator pos	sition desktop – operating)				
]	Measured according to: SO 7779 ECMA-74								
		Other	only if not covered by	ECMA-74)					
<u> </u>	I .		(, co.c.ca by						

Model number *	ZA5C, ZA5D	Logo	Lanava
Issue date *	2019.10.8		Lei IOVO.

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

Product	t environmental attributes - Market requirements (continued)	equire	<u>men</u> t	me
Item		Yes	No	n.a
	Electromagnetic emissions			
P10.4	Computer display meets the requirement for low frequency electromagnetic fields of the following voluntary program(s):			
P12	Ergonomics for computing products			
P12.1*	The display meets the ergonomic requirements of ISO 9241-307 for visual display technologies.	\boxtimes		
P12.2*	The physical input device meets the requirements of ISO 9995 and ISO 9241-410.	\boxtimes		
P13	Packaging and documentation			
P13.1*	Product packaging material type(s): box weight (kg): 0.09 Product packaging material type(s): paper(manual) weight (kg): 0.106 Product packaging material type(s): PE weight (kg): 0.005			
P13.2*	Product plastic primary packaging is free from PVC.	\boxtimes		
P13.3*	For product primary corrugated fiberboard packaging, specify the contained percentage of minimum post-consumer recovered fiber content: %			X
P13.4*	Specify media for user and product documentation (tick box): ☑Electronic, ☑Paper, ☑Other			
P13.5	(Please only complete this item if paper documentation used) User and product documentation on paper media is chlorine-free: If Yes, please specify:			
	Totally chlorine-free	\square		
	Elemental chlorine-free			
	Processed chlorine-free	Ħ		
P14	Voluntary programs			
P14.1	The product meets the requirements of the following voluntary program(s):			
	ENERGY STAR® Criteria version: 7.1 Date: 2018-11-18 Product category: 2 Eco-label: Criteria version: Date: Product category: Eco-label: Date: Product category: Product category:			
P15	Additional information (See NOTE B10)			
P9	Energy consumption of specific configuration may vary; description of the tested product configuration	า:		
	NOTE: Supplier makes no representations, guarantees, assurances or warranties whether express or implied, information contained in this document. All information provided by supplier in this document is provided based knowledge available at the time of completion, and supplier shall have no obligation to update such information provided here is approximate and provided for informational purposes only. See a Lenovo Account Representa information.	on supp	lier's ormat	ion
P9	See Energy Star Qualified Notebooks & Tablet Computers for the latest information: http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=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 Smart Tab M8	Logo
Model Number	ZA5C, ZA5D	Lonovo
Issue Date	2019.10.8	Lenovo.
Additional information		

(d)	Year of manufacture:				2019		
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 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)		
capability adjustments applied during testing	Memory over base [GB]	3					
	Additional internal storage	No (Yes / No)	(Yes / No)	(Yes / No)	(Yes / No)		
	Discrete television tuner	No (Yes / No)	(Yes / No)	(Yes / No)	(Yes / No)		
	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)	No					
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)	5.52					
	Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled						
g)	Idle state power demand (Watts);				1.66		
h)	Sleep mode power demand (Watts);				0.22		
i)	Sleep mode with WOL enabled power d	emand (Watts) (where	enabled);				
j)	Off mode power demand (Watts);						
k)	Off mode with WOL enabled power demand (Watts) (where enabled);						
l)	Internal power supply efficiency at 10 %	y efficiency at 10 %, 20 %, 50 % and 100 % of rated output power (if applicable):					
	10% 20% 50%	100% Avera	ige				
(m)	External power supply efficiency (if applicable)*:						
	Average active efficiency: 81.82%						
	*internal note: show values for all available external p	ower supplies					
0)	Minimum number of loading cycles that the batteries can withstand (applies only to notebook computers): 800cls, >709 capacity						
(p-1)	Measurement methodology used to determine information mentioned in points (I) – internal PSU efficiency: NA						
p-2)	Measurement methodology used to determine information mentioned in points (m) – external PSU efficiency: Measuring the Energy Consumption of External Power Supplies, Appendix Z to 10 CFR Part 430.						

(p-3)	Measurement methodology used to determine information mentioned in points (o) – loading cycles batteries: 0.5C Charge/Discharge						
(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: ENERGY STAR Final Test Method for Computers, Rev. Nov 2018						
(q)	Sequence of steps for achieving a stable condition with respect to power demand: ENERGY STAR Final Test Method for Computers, Rev. Nov 2018						
(r)	Description of how sleep and/or off mode was selected or programmed: refer to power management, sleep mode: ACPI system level G1/S3 (suspend to RAM) state; off mode: ACPI system level G2/S5 ('soft off') state						
(s)	Sequence of events required to reach the mode where the equipment automatically changes to sleep and/or off mode: *refer to power management, 1mins automatically reaches sleep mode*						
(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 computer automatically reaches a power mode that has a lower power demand requirement than sleep mode (in minutes):						
(v)	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 manual						
(x)	User information on how 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: 230V50HZ-2%-Edition 2.0, 2011-01, Section 4	strumentation, set-up and circuits				
Additio	nal Notebook Batter	y 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							
Bios Backup Battery							
Other:							
Addition	nal information						

Las baterías de este producto no pueden ser sustituidas fácilmente por los propios usuarios.

Výměnu baterie/baterií v tomto výrobku by neměli provádět sami užívatelé. 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. 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 uşor înlocuită (înlocuite) de utilizatorii înşişi. 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.