



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 *	Lenovo Global Environmental Affairs		
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.	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 300e Chromebook 2nd Gen AST				
Model number *	82CE				
Issue date *	2020-2-16				
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 *	82CE Logo			
lssue da	te *	2020-2-16	Len		
Product	t environ	mental attributes - Legal requirements	Require		t met
Item			Yes	No	n.a.
P1		us substances and preparations			
P1.1*	Products	do comply with current European RoHS Directive. (See legal reference and NOTE B1)	\boxtimes		
P1.2*	Comme	e do not contain Asbestos (see legal reference). nt: Legal reference has no maximum concentration value.	\boxtimes		
P1.3*	hydrobro trichloro	do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), profluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachloride, 1,1,1- ethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum ration values.			
P1.4*		o do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlorinated I (PCT) in preparations (see legal reference).	\boxtimes		
P1.5*	Products	do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in th ntaining at least 48% per mass of chlorine in the SCCP (see legal reference).	e 🔀		
P1.6*	(see leg	h direct and prolonged skin contact do not release nickel in concentrations above 0,5 μg/cm²/weeł al reference). nt: Max limit in legal reference when tested according to EN1811:2011-5.	(🛛		
P1.7*	REACH	Article 33 information about substances in articles is available at (add URL or mail contact): ww.lenovo.com/us/en/about/sustainability	\square		
P2	Batterie	S			
P2.1*		duct contains a battery or an accumulator, the battery/accumulator is labeled with the disposal Information on proper disposal is provided in user manual. (See legal reference)	\boxtimes		
P2.2*	Batteries	or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmium. (See lega	I 🛛		
P2.3*	Batteries	and accumulators are readily removable. (See legal reference)	\square		
P3	Conform	nity verification & Eco design (ErP)			
P3.1*	The proc	luct is CE-marked to show conformance with applicable legal requirements (see legal reference). laration of Conformity can be requested at: https://www.lenovo.com/us/en/about/sustainability	\boxtimes		
P3.2*		luct complies with the Eco design requirements for energy-related products,			
	· ·	al reference).			
	Require	d information is; given in item P15 or added to this document,			
		available at: https://www.lenovo.com/us/en/compliance/eco-declaration			
P5		packaging			
P5.1*	hexavale	ng and packaging components do not contain more than 0,01% lead, mercury, cadmium an 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(se legal reference).			
P5.3*	(see leg	luct packaging material is free from ozone depleting substances as specified in the Montreal Protoc al reference).	ol 🔀		
		t: Legal reference has no maximum concentration values.			
P6		nt information			
P6.1*	Informati	on 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 *		82CE	Logo			
Issue da	te *	2020-2-16		Lend	ovo	н
Product		mental attributes - Market requirements (See General NOTE GN	below)			
		nmental conscious design		Require		
Item P7		tory to fill in. Additional information regarding each item may be found under P14. Disassembly, recycling		Yes	No	n.a.
P7.1*	0 /	t have to be treated separately are easily separable				
P7.2*		haterials in covers/housing have no surface coating.			<u> </u>	<u> </u>
P7.3*		arts > 100 g consist of one material or of easily separable materials.			<u> </u>	<u> </u>
P7.4*		arts > 25 g have material codes according to ISO 11469 referring ISO 1043-4.			<u> </u>	<u> </u>
P7.5	Plastic parts > 25 g have material codes according to 150 11409 reterming 150 1045-4. Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.				<u> </u>	<u> </u>
					<u> </u>	<u> </u>
P7.6*		re easily separable. (This requirement does not apply to safety/regulatory labels).				
P7.7*	Product	g can be done e.g. with processor, memory, cards or drives				
P7.8*		ig can be done using commonly available tools			<u> </u>	<u> </u>
P7.9						┝┝
		ints are available after end of production for: 5 years				<u> </u>
P7.10		s available after end of production for: 5 years				
P7.11*		and substance requirements				
F1.11		cover/housing material type (e.g. plastics, metal, aluminum): type: PC/ABS Material type: Materia	al type:			
P7.12		n materials of external electrical cables are PVC free.	ur type.		\mathbf{X}	
P7.13		n materials of internal electrical cables are PVC free.		<u> </u>		⊢⊢
P7.14		plastic casing/cover parts > 25 g contain no more than 0,1% weight (1000 ppm) b	romine and 0.1	%		⊢⊢
	weight (1000 ppm) chlorine attributable to brominated flame retardants, chlorinated flam	e retardants, ar	nd 🗖		
		chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) chlorine i	n parts containir	ıg		
P7.15		n 25% post-consumer recycled content. ircuit boards, PCBs (without components) are low halogen: all 🗌 PCBs > 25 g 🗌				
	as define	ed in IEC 61249-2-21. (See 1NOTE B2)				<u> </u>
P7.16	Marking:	tarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4: >PC+ABS-TD15FR(40)<				
P7.17		nemical specifications of flame retardants in printed circuit boards > 25 g (without c			_	_
	TBBF 26265-08	A (additive), ☐TBBPA (reactive) (See NOTE B3), ⊠Other Brominated epoxy (r <mark>esin.</mark> CAS #:	\bowtie		
	<u>Alt. 2: C</u> ł	nemical specifications of flame retardants in printed circuit boards (without compon	ents) > 25 g			\square
P7.18		g ISO 1043-4: ame retarded plastic parts > 25 g contain the following flame retardant substance	o /o ron o roti o no			
F7.10		ations above 0,1%:	es/preparations	"' 🖂		
		ical name: BPADP , CAS #: 181028-79-5 (See NOTE B4)				
		ical name: , CAS #:				
	3. Chem	ical name: , CAS #: "				
	<u>Alt. 2: </u> Cł	nemical specifications of flame retardants in plastic parts > 25 g according ISO 104	3-4:			\boxtimes
P7.19		parts > 25 g, flame retardant substances/preparations above 0,1% are used which	n have been		\boxtimes	
	•	the following Risk phrases; and Hazard statements:				
DT 0.04			See note B5)			
P7.20*	Postcons	sumer recycled plastic material content is used in the product (See Note B6):		\bowtie		
	lf YES; a	t least one of the two alternatives below shall be answered;				
	a)	Of total plastic parts' weight > 25 g, the postconsumer recycled plastic material c	ontent			
	or	(calculated as a percentage of total plastic by weight) is 2.5 % .				
	or b)	The weight of recycled material is 11.9 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 *	82CE	Logo	Lenovo		
Issue date *	2020-2-16		Leiiovo		
Product environmental attributes - Market requirements (continued) Requirement m					

Item

Requirement met

i i i i i i i i i i i i i i i i i i i	Yes	No	n.a.
	res	No	n a

P7.21* P7.22* P8	Biobased plastic	ostance requirements material content is use				
P8	Light sources are			012 D1).		
	Light sources are free from mercury, i.e. less than 0,1 mg/lamp. If mercury is used specify: Number of lamps: and maximum mercury content per lamp: mg					
D0.4*	Batteries			· · · · · · · · · · · ·		
P8.1*	Battery chemical	composition: Lithium	ion			
P9		ption (See NOTE B8)				
P9.1			els or energy consumpti			
Energy mod		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-n	nax)	43.83 W	43.76 W	43.4 W	Full load	
Category	<u>y 1</u>					
Short Idle Disabled	State - WOL	3.53 W	3.37 W	3.47 W	Use for ENERGY STAR V8.0 registration (P _{idle})	
Long Idle S Disabled	State - WOL	0.58 W	0.58 W	0.62 W	Use for ENERGY STAR V8.0 registration (P _{idle})	
Sleep (S3)	- WOL Disabled	0.58 W	0.58 W	0.62 W	Use for ENERGY STAR V8.0 registration	
Off (S5) - V	VOL Disabled	0.44 W	0.44W	0.48 W	Use for ENERGY STAR V8.0 registration	
EPS No-loa (External power su wall outlet but disc	ad upply / charger plugged in the connected from the product.)	0.01 W	0.01 W	0.1 W		
PTEC * Typical Ene	ergy Consumption	16.68 W	16.68 W	16.68 W		
ETEC * Annual Ene	ergy Consumption	12.5 kWh/year	12.1 kWh/year	12.6 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)	
Short Idle S Enabled	State - WOL	3.53 W	3.37 W	3.47 W	Use for ENERGY STAR V8.0 registration (P _{idle})	
					led; P _{idle} : Idle State - WOL Enabled	
			al Efficiency Marking Pr	otocol) * : VI		
	olution * : 1366x7	• •				
Default time	e to enter energy s	ave mode: 25 minutes				
P9.2*	Information about	t the energy save funct	ion is provided with the	product.		
P9.3	Energy efficiency	class (monitors only):				
P10	Emissions					
			to ISO 9296 (See NOTE			
P10.1		Mode description			nit A-weighted sound power level, <i>L_{WA,c}</i> (B)	
	Idle	* System Idle		*17.3		
	Operation	* CPU;Operation		* 16.4		
			nd pressure level (dB) L_{pAr}		osition desktop – idle)	
	Other mode		nd pressure level (dB) L_{pAr}	n (operator p	osition desktop – operating)	
	Measured accord	ling to: 🔀 ISO 7779	ECMA-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 http://www.ecma-international.org/publications/standards/Ecma-370.htm

NOTE B9 A Guidance document on Acoustic Noise is available; $see \ \underline{http://www.ecma-international.org/publications/standards/Ecma-370.htm}$

Model n	umber *	82CE			Logo			
Issue da	ate *	2020-2-16				Leno	VO	
Product	t environ	mental attribut	es - Market requirements	s (continued)	·	Require	ment	me
ltem						Yes	No	n.a
	Electro	magnetic emissi	ons					
P10.4	, program	n(s): EN55035	the requirement for low freque	ency electromagnetic field	s of the following volunt	tary 🔀		
P12		mics for comput						
P12.1*	The dis	play meets the erg	gonomic requirements of ISO	9241-307 for visual displa	y technologies.	\square		
P12.2*	The phy	sical input device	meets the requirements of IS	SO 9995 and ISO 9241-41	0.	\square		
P13	Packag	ing and docume	ntation					
P13.1*	Product	packaging mater packaging mater packaging mater	ial type(s): <i>carton</i> wei	ght (kg): 0.0345 ght (kg): 0.2745 jht (kg): 0.013				
P13.2*			ackaging is free from PVC.			\square		
P13.3*		duct primary corr er recovered fiber	ugated fiberboard packaging content: 90 %	g, specify the contained p	percentage of minimun			
P13.4*		media for user an tronic, XPaper,	d product documentation (tic	k box):				
P13.5	Ùser an		s item if paper documentatior entation on paper media is ch					
		chlorine-free tal chlorine-free						
	Process	ed chlorine-free				H		
P14	Volunta	ry programs						
P14.1			quirements of the following ve	oluntary program(s):				
	ENERG EPEAT PCGL TCO Eco-lab	Y STAR® el:	Criteria version: 8.0 Criteria version: 2018 Criteria version: V13 Criteria version: 8.0 Criteria version:	Date: 2020-2-11 Date: 2020-2-16 Date: 2020-2-16 Date: 2020-3-10 Date:	Product category: 1 Product category: Product category: Product category: Product category:			
	Eco-lab	el:	Criteria version:	Date:	Product category:			
P15		nal information (See NOTE B10)					
P9			specific configuration may	vary; description of the	tested product config	guration:		
	NOTE: information knowled	Supplier makes no tion contained in t Ige available at th d here is approxim	o representations, guarantee his document. All information e time of completion, and sup nate and provided for informa	s, assurances or warrantie provided by supplier in th oplier shall have no obligat	s whether express or ir is document is provided tion to update such info	nplied, regardin I based on supp rmation. The int	olier's formati	ion
P9	See En		d Notebooks & Tablet Compu					

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 300e Chromebook 2nd Gen AST	Logo
Model Number	82CE	
Issue Date	2020-2-16	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 C (according to ErP Lot 3)						
	Memory over base [GB]	4					
ents sting	Additional internal storage	YES (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)	NO					
esults	Etec Value (kWh) - dGfx disabled all discrete graphics cards (dGfx) are disabled/ UMA is active for switchable graphics/ product has no graphics cards (dGfx)	12.65					
Test results	Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled						
(g)	Idle state power demand (Watts);			·	3.4		
(h)	Sleep mode power demand (Watts);				0.7		
(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);		/		
(I)	Internal power supply efficiency at 10 %	, 20 %, 50 % and 100 °	% of rated output powe	er (if applicable):			
	10% 20% 50%	100% Avera	ige				
(m)	External power supply efficiency (if appli	cable)*:					
	Average active efficiency: 87.98%,88.6	3%,88.83%,					
	*internal note: show values for all available external p						
(0)	Minimum number of loading cycles that	the batteries can withs	tand (applies only to n	otebook computers):	800		
(p-1)	Measurement methodology used to dete	ermine information mer NA	itioned in points (I) – ir	nternal PSU efficiency:			
(p-2)	-2) Measurement methodology used to determine information mentioned in points (m) – external PSU efficiency: EN 50563:2011 measurement methodology						

(p-3) Measurement metho	Measurement methodology used to determine information mentioned in points (o) – loading cycles batteries: 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							
	required to reach the mode where the equipment au	tomatically changes to sleep and/or					
off mode:	NA						
	te condition before the computer automatically re not exceed the applicable power demand requirement		30min				
(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				
	re the display sleep mode is set to activate after		10min				
	ergy-saving potential of power management functio Refer to User Guide						
(x) User information on h	now to enable the power management functionality: 230V/50Hz						
	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	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. $^{1)} \ensuremath{}$						
Internal/built-in Battery							
External/detachable Battery							
Bios Backup Battery							
Other:							
Additional information							
as baterias de este producto no pueden si ýměnu baterie/baterií v tomto výrobku by i Brugeren kan ikke uden videre udskifte bati ber Akku/die Akkus dieses Produkts kann// Kasutajad ei saa selle toote akut/akusid ise I µmropid[-ɛc] oro mpoïóv auró δɛv µmop "a/les batterie(s présente(s) dans ce produ Korisnik ne može lako zamijeniti Bateriju sa a batteria/le batterie in questo prodotto no jetotāji paši nevar nomainīt šā ražojuma al šio gaminio baterijos [bateriju] pats vartotoj A termék akkumulátorát/akkumulátorait a fe I-batterija/batteriji f'dan il-prodott ma tistax/ Jatteriet [ene] i dette produktet kan ikke leti De batterij(en) in dit product is (zijn) door de Jzytkownik nie može sam w latwy sposób v A ou as baterias deste produto não podem	Dodykr 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 hõlpsasti asendada. Dúv va αντικατασταθούν εύκολα από rouç iδιους rouç χρήστες it ne peuvent être facilement remplacée(s) par les utilisateurs eu im u ovom proizvodu. n può/possono essere facilmente sostituita/e dall'utente. kumulatoru(-us). as negali lengvai pakeisti. Jihasználó nem tudja egyedül egyszerűen kicserélni. jistgħux tiġi/jiġu sostitwita/i mill-utenti stess. e sersattes av brukerne selv. e gebruiker niet gemakkelijk vervangbaar. wymienić baterii w tym produkcie. ser facilmente substituídas pelos próprios utilizadores. e (pot) fi uşor înlocuită (înlocuite) de utilizatorii înşişi. ňať používateľ. ni ne morejo zlahka zamenjati. psit käyttäjän vaihdettavissa. t batteriet/batterierna.	verden.					