

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	
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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 *	Legion Pro 5 16ARX8, Legion R9000P ARX8					
Model number *	82WM					
Issue date *	2023-02-14					
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 *	82WM Logo			
lssue da	ite *	2023-02-14	Leng		D.
Produc	t environ	mental attributes - Legal requirements	Require		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)	\square		
P1.2*		s do not contain Asbestos (see legal reference). nt: Legal reference has no maximum concentration value.	\boxtimes		
P1.3*	hydrobro trichloro	s do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), pmofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachloride, 1,1,1- ethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum ration values.			
P1.4*	Products	s do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlorinated /l (PCT) in preparations (see legal reference).	\boxtimes		
P1.5*		s do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in the ntaining at least 48% per mass of chlorine in the SCCP (see legal reference).	ie 🔀		
P1.6*	(see leg	th direct and prolonged skin contact do not release nickel in concentrations above 0,5 μg/cm²/wee al reference). nt: Max limit in legal reference when tested according to EN1811:2011-5.	k 🔀		
P1.7*		Article 33 information about substances in articles is available at (add URL or mail contact): www.lenovo.com/us/en/Lenovo-REACH-SVHC-Disclosure	\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*		s or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmium. (See lega	ıl 🖂		
P2.3*	Batteries	and accumulators are readily removable. (See legal reference)			
P3	Conform	nity verification & Eco design (ErP)			
P3.1*	The proo The D https://	Juct is CE-marked to show conformance with applicable legal requirements (see legal reference). eclaration of Conformity can be requested at (add link or e-mail address www.lenovo.com/us/en/compliance/eu-doc for EU www.lenovo.com/us/en/compliance/uk-doc for UK	s): ;		
P3.2*		luct complies with the Eco design requirements for energy-related products, al reference).	\square		
	Require	d information is;			
		vww.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 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(e 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		nt information			
		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 n	umber *	82WM	Logo			
Issue da	ite *	2023-02-14		Len	ovo	D _m
Product		mental attributes - Market requirements (See General NOTE GN				_
		onmental conscious design	ŀ	lequire		
Item	*=manda	tory to fill in. Additional information regarding each item may be found under P14.		Yes	No	n.a.
P7 P7.1*	Design,	Disassembly, recycling at have to be treated separately are easily separable				
P7.2*		naterials in covers/housing have no surface coating.				
P7.3*	-	arts > 100 g consist of one material or of easily separable materials.				
P7.4*	-	arts > 25 g have material codes according to ISO 11469 referring ISO 1043-4.		\square		
P7.5	Plastic p	arts are free from metal inlays or have inlays that can be removed with commonly a	available tools.	\boxtimes		
P7.6*	Labels a	re easily separable. (This requirement does not apply to safety/regulatory labels).		\boxtimes		
	Product	lifetime				
P7.7*	Upgradir	ng can be done e.g. with processor, memory, cards or drives		\boxtimes		
P7.8*	Upgradir	ng can be done using commonly available tools				
P7.9	Spare pa	arts are available after end of production for: 3 years				
P7.10		is available after end of production for: 5 years				
		and substance requirements				
P7.11*		cover/housing material type (e.g. plastics, metal, aluminum):				
		type: plastics:PC+ABS Material type: aluminum				
P7.12	Insulatio	n materials of external electrical cables are PVC free.			\square	
P7.13	Insulatio	n 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) b	romine and 0,1%			
	weight (1000 ppm) chlorine attributable to brominated flame retardants, chlorinated flam	e retardants, and			
		I chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) chlorine i	n parts containing			
P7.15		an 25% post-consumer recycled content.	1			
	as define	circuit boards, PCBs (without components) are low halogen: all 📃 PCBs > 25 g 🔀 ed in IEC 61249-2-21. (See 1NOTE B2)	- 0			
P7.16	Marking:					
P7.17		hemical specifications of flame retardants in printed circuit boards > 25 g (without c	omponents):	_	_	
	TBBF	PA (additive), TBBPA (reactive) (See NOTE B3), Other: , CAS #:				
	<u>Alt. 2: </u> CI	hemical specifications of flame retardants in printed circuit boards (without compon	ents) > 25 g			
	accordin	g ISO 1043-4: <i>FR(16)</i>	, -	\boxtimes		
P7.18	Alt. 1	retarded plastic parts >25g contain the following flame retardant substance	-/in			
		rations above 0.1%:	s/preparations in			
		ical name: CAS #:				
	2. Chem	ical name: CAS #:				
		ical name: CAS #:				
		ical name: ,CAS #:				
	Alt. 2 Chemica	al specifications of flame retardants in plastic parts >25g according ISO 1043-4:				
	FR(40)					
P7.19		c parts > 25 g, flame retardant substances/preparations above 0,1% are used whicl	have been		⊢⊢	
F7.19		the following Risk phrases; and Hazard statements: H411;H413	Thave been			
		rce(s) for these classifications is/are found at (add URL(s)): <i>European Court</i>	cil Directive			
	67/548/E					
P7.20*	Postcon	sumer recycled plastic material content is used in the product (See Note B6):		\boxtimes		
	If YES: a	at least one of the two alternatives below shall be answered;				
		total plastic parts' weight > 25 g, the postconsumer recycled plastic material conter	t (calculated as a			
		centage of total plastic by weight) is 2.06% .	,			
	or					
	b) The	e weight of recycled material is 12.5 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 * Issue date *	82WM 2023-02-14	Logo	Lenovo
Product environm	nental attributes - Market requirements (continued)		Requirement met

Item

Material and substance requirements (continued) P7.21 Biobased plastic material content is used in the product (See NOTE B7): \square If YES; at least one of the two alternatives below shall be answered; Of total plastic parts' weight > 25 g, the biobased plastic material content (calculated as a percentage of a) total plastic by weight) is 0 %. or b) The weight of the biobased plastic material is g P7.22 Light sources are free from mercury, i.e. less than 0,1 mg/lamp. \ge If mercury is used specify: Number of lamps: and maximum mercury content per lamp: mg **P8 Batteries** P8.1 Battery chemical composition: LI-ION Polymer battery and lithium-metal battery Energy consumption (See NOTE B8) **P9** P9.1 For the product the following power levels or energy consumptions are reported: Reference/Standard for energy Energy mode Power level at Power level at Power level at 100 V AC 115 V AC 230 V AC modes and test method ' Peak (On-max) 300 W 300 W 300 W Full load Category 2 Short Idle State - WOL 16.18 W 16.06 W 14.99 W ENERGY STAR Computers V8 Enabled Long Idle State - WOL 10.40 W 10.88 W 10.41 W **ENERGY STAR Computers V8** Enabled 0.87 W 0.89 W 0.85 W **ENERGY STAR Computers V8** Sleep (S3) - WOL Enabled Off (S5) - WOL Enabled 0.34 W 0.35 W 0.34 W **ENERGY STAR Computers V8** EPS No-load 0.09 W 0.09 W 0.09 W (External power supply / charger plugged in the wall outlet but disconnected from the product.) PTEC ' W W W \boxtimes **Typical Energy Consumption** ETEC 55.04 kWh/year 55.21 kWh/year 51.89 kWh/year $E_{\text{TEC}} = (8760/1000) \times (P_{\text{off}} \times 0.25)$ Annual Energy Consumption + P_{sleep} x 0.35 + P_{long_ldle} x 0.10+ Pshort Idle x 0.30) Poff: Off Mode(S5) - WOL Enabled; Psleep: Sleep Mode(S3) - WOL Enabled; Pidle: Idle State - WOL Enabled External Power Supply Efficiency Level (International Efficiency Marking Protocol) *: VI Display resolution * : 4.096 megapixels Default time to enter energy save mode: 5 minutes P9.2 Information about the energy save function is provided with the product. \mathbf{X} Energy efficiency class (monitors only): P9.3 \mathbf{X} P10 Emissions Noise emission - Declared according to ISO 9296 (See NOTE B9) P10.1 Mode Mode description Statistical upper limit A-weighted sound power level, L_{WA,c} (B) 2.6 Idle Idle: Operating **CPU: Operating** 5.4 Operation Declared A-weighted sound pressure level (dB) L_{pAm} Other mode 19.1 (operator position desktop - idle) Declared A-weighted sound pressure level (dB) L_{pAm} Other mode 46 (operator position desktop – operating) Measured according to: X ISO 7779 ECMA-74 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 Yes

No

n.a.

Model nu	umber *	82WM				Logo	Long		
lssue dat	te *	2023-02-14					Leno	VO	
Product	environr	nental attribu	tes - Market requirement	ts (continued)			Require	ment	me
ltem							Yes	No	n.a
		magnetic emiss							
P10.4	program	(s): MPR-II(3 pi	the requirement for low frequence of the requirement for low frequence on the requirement of the requirement	ency electromagnetion	c fields of the foll	owing voluntary			
P12		mics for compu							
P12.1*	The disp	lay meets the er	gonomic requirements of ISC) 9241-307 for visual	display technolo	gies.	\square		
P12.2*	The phy	sical input device	e meets the requirements of I	SO 9995 and ISO 92	41-410.		\boxtimes		
P13		ing and docume							
P13.1*	Product Product Product Product Product	packaging mate packaging mate packaging mate packaging mate packaging mate	rial type(s): <i>Paper - Corruga</i> rial type(s): <i>Paper - from offi</i> rial type(s): <i>Paper - from offi</i> rial type(s): <i>Plastic - Solid E</i> rial type(s): <i>Plastic - LDPE (I</i> rial type(s): <i>Paper - Bamboo</i>	set / recycled source set / recycled source PE (solid Expanded low density polyethy	e(Handle) e(Documents) polyethylene) /lene) weight (kg	weight (kg): 0.0 weight (kg): 0.0 weight (kg): 0.0 g): 0.015 (kg): 0.0055	08 077		
P13.2*	Product	plastic primary p	ackaging is free from PVC.				\square		
P13.3*	consume	er recovered fibe	rugated fiberboard packagin er content: 100 %		ined percentage	of minimum p	ost-		
P13.4*		media for user a ic 🔀, Paper 🔀	nd product documentation (tio , Other	ck box):					
P13.5	Ùser and		is item if paper documentatic entation on paper media is cl				\boxtimes		
	Totally c	hlorine-free					\boxtimes		
	Element	al chlorine-free					$\overline{\boxtimes}$		
	Process	ed chlorine-free					п		
P14	Volunta	ry programs							
P14.1	The proc	duct meets the re	equirements of the following v	voluntary program(s):					
	ENERG Eco-labe Eco-labe		Criteria version: Criteria version: Criteria version:	Date: Date: Date:	Product	category: category: category:			
P15	Additio	nal information	(See NOTE B10)						
P 9			f specific configuration ma						
<u></u>	the info supplied informa Accoun	rmation contair r's knowledge a tion. The inform t Representativ	no representations, guaran ned in this document. All in available at the time of com- nation provided here is app e for more information.	formation provided pletion, and supplie roximate and provid	by supplier in th r shall have no ded for informat	his document i obligation to u	is provided pdate such	based	lon
P9			ied Notebooks & Tablet Co https://www.energystar.gov/			ters			

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	Legion Pro 5 16ARX8	Logo
Model number *	82WM	
Issue date *	2023-02-14	Lenovo
Additional information		

d)	Year of manufacture:				2023	
e)	Etec value (kWh) per ErP Lot 3 Catego disabled and if the system is tested with	ory and capability adjus n switchable graphics n	tments applied when node with UMA driving	all discrete graphics g the display.	cards (dGfx) are	
F)	Etec value (kWh) per ErP Lot 3 Catego enable	ry and capability adjust	ments applied when a	all discrete graphics	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]			32		
ients 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 lied du	Discrete Audio Card	(Yes / No)	(Yes / No)	No (Yes / No)	(Yes / No)	
capa app	Discrete graphics Card(s) [number / #]	#: (Yes / No)	# <u>:</u> (Yes / No)	Yes #: 1 (Yes / No)	#: (Yes / No)	
	Category of discrete graphics Card(s)			G7		
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)					
Test results	Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled			29.89		
g)	Idle state power demand (Watts);	1	I		10.41	
ר)	Sleep mode power demand (Watts);				0.85	
)	Sleep mode with WOL enabled power d	emand (Watts) (where	enabled);		0.85	
)	Off mode power demand (Watts);				0.34	
<)	Off mode with WOL enabled power dem	and (Watts) (where en	abled);		0.34	
)	Internal power supply efficiency at 10 %	, 20 %, 50 % and 100 §	% of rated output pow	er (if applicable):		
	10% 20% 50%	100% Avera	ige			
n)	External power supply efficiency (if appl	icable)*:				
	Average active efficiency: 300W: 93.33 *internal note: show values for all available external p		0W:92.84%, 92.62%,	92.47%		
0)	Minimum number of loading cycles that		and (applies only to n	otebook computers):	300CYCLES	
p-1)	Measurement methodology used to determine information mentioned in points (I) – internal PSU efficiency:					
p-2)	Measurement methodology used to dete	ermine information mer 63:2011 measuremen		external PSU efficience	cy:	

(p-3)	Measurement metho	dology used to determine information mentioned in p EN 50563:2011 measurement methodo				
(p-4)		dology used to determine information mentioned in r Point P9.1 in the Product IT Eco Declaration:	maximum, 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 methodo	ology			
(r)	Description of how sl	eep 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: refer to power management, 15mins automatically reaches sleep mode					
(t)		te condition before the computer automatically re- not exceed the applicable power demand requirement		15		
(u)	Length of time after	a period of user inactivity in which the compute	r automatically reaches a power	NA		
(v)		ver power demand requirement than sleep mode (in the display sleep mode is set to activate after		5		
(w)		nergy-saving potential of power management function		~		
	User information	described in User Guide and Power Manager un	nder Lenovo Vantage menu in all			
		programs				
(x)	User information on I	how to enable the power management functionality:				
	User information	described in User Guide and Power Manager un programs	nder Lenovo Vantage menu in all			
(Z)	Test parameters for I	measurements: — test voltage in V and frequency in	Hz, — total harmonic distortion of			
	the electricity supply	system, — information and documentation on the in sting: 230V, 50GHz, Total Harmonic Distortion <2 9	strumentation, set-up and circuits			
A	al Nataka ak Datta					
Addition	nal Notebook Batter	Battery[ies] not user replaceable	Battery[ies] user replaceable	n/a		
		·····		II/a		
		The battery[ies] in this product cannot be easily replaced by users themselves. ¹⁾				
Internal/	built-in Battery					
	/detachable Battery					
	ckup Battery					
Other:						
Addition	al information					
) h a h atta m (5 a d	-1 in 4his and share source has a					
кумулаторна	ата[ите] батерия[и] в този п	asily replaced by users themselves. родукт не може да се замени[ят] лесно от самите потребител	пи.			
		er sustituidas fácilmente por los propios usuarios. neměli provádět sami uživatelé.				
rugeren kan	ikke uden videre udskifte bat	teriet/batterierne i dette produkt.				
	Akkus dieses Produkts kann/l aa selle toote akut/akusid ise	können nicht ohne weiteres vom Benutzer selbst ausgetauscht w hölpsasti asendada	verden.			
μπαταρία[-ε	ς] στο προϊόν αυτό δεν μπορ	ούν να αντικατασταθούν εύκολα από τους ίδιους τους χρήστες				
	(s présente(s) dans ce produ ože lako zamijeniti Bateriju sa	it ne peuvent être facilement remplacée(s) par les utilisateurs eu am u ovom proizvodu.	ıx-mëmes.			
	batterie in questo prodotto no ievar nomainīt šā ražojuma a	n può/possono essere facilmente sostituita/e dall'utente.				
io gaminio ba	aterijos [baterijų] pats vartotoj	as negali lengvai pakeisti.				
		elhasználó nem tudja egyedül egyszerűen kicserélni. jistgħux tiġi/jiġu sostitwita/i mill-utenti stess.				
atteriet [ene]	i dette produktet kan ikke let	t erstattes av brukerne selv.				
		e gebruiker niet gemakkelijk vervangbaar. wymienić baterii w tym produkcie.				
ou as bateria	as deste produto não podem	ser facilmente substituídas pelos próprios utilizadores.				
	ile) din acest produs nu poate omto výrobku nemôže vymie	e (pot) fi ușor înlocuită (înlocuite) de utilizatorii înșiși. ňať používateľ.				
aterij/baterije	e v tem izdelku uporabniki sar					
aman tuottee	n okku [okut] oli 241					
et är inte enk	kelt för kunden att själv byta ι	osti käyttäjän vaihdettavissa.				