

Product environmental attributes – THE ECO DECLARATION

The declaration may be published only when all rows and/or fields marked with an * are filled-in (n.a. for not applicable). Additional information regarding each item may be found under P14.

Brand *	ThinkPad	Logo		
Company name *	Lenovo			
Contact information *				
Internet site *	http://www.lenovo.com/social_responsibility/us/en/environment.html			
Additional information	The latest version of this document can be found at http://www.lenovo.com/social_responsibility/us/en/datasheets_notebooks.html			

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 PC					
Commercial name *	ThinkPad X230/X230i					
Model number *	M/T: 2306/2320/2322/2324/2325/2330/2333					
Issue date *	2014, June 17					
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.

Quality	Control	equireme	ent met
Item		Yes	No
QC1 *	The company enforces an internal quality control scheme to ensure the correctness of this eco declaration	\boxtimes	
QC2 *	The company is a member of an eco declaration system that enforces regular independent quality control such as organized by IT-Företagen (see www.itecodeclaration.org).	\square	

Model number *	ThinkPad X230/X230i	M/T: 2306/2320/2322/2324/2	2325/2330/2333
Issue date *	2014, June 17	Logo	lenovo

Produc	t environmental attributes - Legal requirements	Require	ment	met
Item		Yes	No	n.a.
P1	Hazardous substances and preparations			
P1.1*	Products do not contain more than; 0.1% lead, 0.01% cadmium, 0.1% mercury, 0.1% hexavalent			
	chromium, 0.1% polybrominated biphenyls (PBB) or 0.1% polybrominated diphenyl ethers (PBDE). (See			
	legal reference and Note B1)			
P1.2*	Products do not contain Asbestos (see legal reference).			
P1.2		\boxtimes		
	Comment: Legal reference has no maximum concentration value.			
P1.3*	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC),	\square		
	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	\square		
	terphenyl (PCT) in preparations (see legal reference).			
P1.5*	Products do not contain more than 0.1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in			
11.5		\boxtimes		
D / a	the chain containing at least 48% per mass of chlorine in the SCCP (see legal reference).			
P1.6*	Textile and leather parts with direct skin contact do not contain Tri-(2,3,-dibromopropyl)-phosphate (TRIS),			\boxtimes
	Tris-(aziridinyl)-phosphineoxide (TEPA), polybrominated biphenyl (PBB) (see legal reference).			
	Comment: Legal reference has no maximum concentration values.			
P1.7*	Textile and leather parts with direct skin contact do not contain more than 0.003% Azo colorants that split			\boxtimes
	aromatic amines. (See legal reference and Note B1)			لالك
P1.8*	Wooden parts do not contain arsenic and chromium as a wood preservation treatment as well as			\boxtimes
	pentachlorophenol and derivatives (see legal reference).			\square
	Comment: Legal reference has no maximum concentration values.			
P1.9*	Parts with direct and prolonged skin contact do not release nickel in concentrations above 0.5	\bowtie		
	microgram/cm ² /week (see legal reference).			
	Comment: Max limit in legal reference when tested according to EN1811:1998.			
P1.10*	REACH Article 33 information about substances in articles is available at (add URL or mail contact):	\square		
	http://www.lenovo.com/social_responsibility/us/en/environment.html			
P2	Batteries			
		N 7		
P2.1*	If the product contains a battery or an accumulator, it is labeled with the disposal symbol and if it contains	\bowtie		
	more than 0.0005% of mercury (for button cells only) by weight, or more than 0.004% of lead, it shall be			
	marked with the chemical symbol for the metal concerned, Hg or Pb. Information on proper disposal is			
	provided in user manual. (See legal reference)			
P2.2*	Button cells used in the product do not contain more than 2% by weight of mercury. Other batteries or	\square		
	accumulators do not contain more than 0.0005% of mercury or 0.002% of cadmium. (See legal reference)			
P2.3*	Batteries and accumulators are easily removable by either users or service providers (as dependent on the	\boxtimes		
	design of the product). Exception: Batteries that are permanently installed for safety, performance, medical			
	or data integrity reasons do not have to be "easily removable". (See legal reference)			
D 0				
P3	Safety, EMC connection to the telephone network and labeling			
P3.1*	The product complies with legally required safety standards as specified (see legal reference).	\bowtie		
P3.2*	The product complies with legally required standards for electromagnetic compatibility (see legal			Ē
	reference).			
P3.3*	If product is intended for connection to a public telecom network or contains a radio transmitter, it complies			
1 3.3		\boxtimes		
	with legally required standards for radio and telecommunication devices (see legal reference).			
P3.4*	The product is labeled to show conformance with applicable legal requirements (see legal reference).	\square		
P4	Consumable materials			
P4.1*	If a photo conductor (drum, belt etc.) is used in the product, it does not contain cadmium max 0.01% (see			
	legal reference and Note B1).			\boxtimes
P4.2*	If ink/toner is used in the product, it does not contain cadmium max 0.1% by weight (see legal reference).			\boxtimes
P4.3*	If the ink/toner formulation/preparation is classified as hazardous according to applicable regulations, the			\square
	product/packaging is adequately labeled and a Safety Data Sheet (SDS) in accordance with these			لالك
	requirements is available (see legal reference).			
P5	Product packaging			
P5.1*	Packaging and packaging components do not contain more than 0.01% lead, mercury, cadmium and	\bowtie		
	hexavalent chromium by weight of these together.			
-				
-	Plastic packaging material is marked according to ISO 11469 referring ISO 1043 (see legal reference).			
P5.2*			<u> </u>	╞
-	Plastic packaging material is marked according to ISO 11469 referring ISO 1043 (see legal reference). The product packaging material is free from ozone depleting substances as specified in the Montreal Protocol (see legal reference).			

Note B1: Restriction applies to the homogeneous material, unless other specified and expressed in weight %.

	te * 2014, June 17 Logo	leno	vo	3).
Droduct	t environmental attributes - Market requirements - Environmental conscious design	Require	mont	mot
Item	*=mandatory to fill in. Additional information regarding each item may be found under P14.	Yes	No	n.a
P6	Treatment information	103	INC	11.a
P6.1*	Information for recyclers/treatment facilities is available (see legal reference).			
P7	Design			
	Disassembly, recycling			
P7.1*	Parts that have to be treated separately are easily separable	\boxtimes		
² 7.2*	Plastic materials in covers/housing have no surface coating.		\boxtimes	
⁻ 7.3*	Plastic parts >100g consist of one material or of easily separable materials.			
P7.4*	Plastic parts >25g have material codes according to ISO 11469 referring ISO 1043.		Ē	
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available too		Ħ	
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).		H	
	Product lifetime			
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives			
P7.8*	Upgrading can be done using commonly available tools		╞	
P7.9.				
P7.10	Spare parts are available after end of production for: 5 years			
7.10	Service is available after end of production for: 5 years Material and substance requirements			
P7.11*	Product cover/housing material type:			
7.11	Material type: <i>PC+ABS-FR(40)</i> Material type: Material type:			
P7.12	Electrical cable insulation materials of power cables are PVC free.		\square	
P7.13	Electrical cable insulation materials of signal cables are PVC free			
P7.14	All cover/housing plastic parts >25g are free from chlorine and bromine.		╞	
P7.15	All printed circuit boards (without components) >25g are halogen free. as defined in IEC61249-2-21.		╞	
17.15	Note B2)			
P7.16	Flame retarded plastic parts >25g in covers / housings are marked according ISO 1043-4: Marking: <i>FR(40)</i>			
P7.17	Alt. 1 Chemical specifications of flame retardants in printed circuit boards >25g (without components): TBBPA (additive), TBBPA (reactive), Other ; chemical name: DOPO(9,10-dihydro-9-oxa- phosphaphenanthrene-10-oxide), CAS #: 35948-25-5	10-		
	Alt. 2 Chemical specifications of flame retardants in printed circuit boards (without components) >25g accordi ISO 1043-4: <i>FR(40)</i>	ng		
P7.18	Alt. 1 Flame retarded plastic parts >25g contain the following flame retardant substances/preparation concentrations above 0.1%:	is in		
	Comment: No legal limits exist, this is a market requirement. Provide a list of all used flame retardants including MSDS for each flame retardant. The list must co complete chemical name, CAS number and supplier. 1. Chemical name: , CAS #: , Supplier: 2. Chemical name: , CAS #: , Supplier:	ntain		
	 3. Chemical name: , CAS #: , Supplier: Alt. 2 Chemical specifications of flame retardants in plastic parts >25g according ISO 1043-4: FR(40) 			
P7.19	Plastic parts >25g are free from flame retardant substances/ preparations above 0.1% classified as R48 R40, R46, R48, R50, R51, R53, R60, R61 and any combination of these (See Note B3)	5, 🔀		
	Of total plastic parts' weight >25g, recycled material content is 0%. (Assessment is about main computer parts on	y.		
P7.20	Battery, AC adapter, Cords, Drives, Keyboard, LCD, and misc parts not included.)			
P7.21	Of total plastic parts' weight >25g, biobased material content is 0%.			
P7.21 P7.22	Of total plastic parts' weight >25g, biobased material content is 0 %. Light sources are free from mercury			
	Of total plastic parts' weight >25g, biobased material content is 0%.			

Note B2: IEC61249-2--21 has maximum limits for chlorine and bromine but does not address fluorine, iodine and astatine which are included in the group of halogens.

Note B3: 'Starting from January 2009, Risk phrases can be replaced by Hazard phrases according to the Globally Harmonized System (GHS), mandatory by December 2010.

Model number *	ThinkPad X230/X230i	M/T: 2306/2320/2322/23	324/2	325/2330/2333
Issue date *	2014, June 17		.ogo	lenovo

lt a ma			et requirements	(continued)		Requireme		met
Item	_					Yes N	0	n.a.
P9	Energy consump					test. One D14		
9.1		e following power le pped w/ WOL Enal		nsumptions are	repor	Ted: See P14		
Energy mo	ode *	Power level at 100 V AC	Power level at 115 V AC	Power level at 230 V AC		ference / Standard for energy modes and te ethod *	st	
Peak (On-	-max)	<i>65/90</i> W	<i>65/90</i> W	<i>65/90</i> W	Ful	ll load		
Categor	<u>'y I1</u>							
Short Idle	- WOL Enabled	11.784 W	11.232 W	11.460 W	Us	e for Energy Star V6 registration(P _{SHORT_IDLE})	
Long Idle	- WOL Enabled	9.168 W	9.300 W	9.576 W	Us	e for Energy Star V6 registration(PLONG_IDLE)		
Sleep (S3) - WOL Enabled	0.840 W	0.840 W	0.900 W	Us	e for Energy Star V6 registration(P _{SLEEP)}		
Sleep (S3) - WOL Disabled	W	W	W		ference		
	WOL Enabled	0.528 W	0.528 W	0.588 W	Us	e for Energy Star V6 registration(POFF)		
	WOL Disabled	W	W	W		e for ErP		-
Categor								
	<u>y iz</u> - WOL Enabled	9.804 W	9.552 W	10.056 W		e for Energy Star V6 registration(P _{SHORT_IDLE}		
	- WOL Enabled	7.980 W	8.892 W	8.208 W		e for Energy Star V6 registration(P_sHORT_DLE	,	
		0.828 W	0.828 W					
) - WOL Enabled			0.888 W		e for Energy Star V6 registration(P _{SLEEP)}		
) - WOL Disabled	W	W	W	-	ference		
	WOL Enabled	0.516 W	0.516 W	0.576 W		e for Energy Star V6 registration(P _{OFF})		
	WOL Disabled	W	W	W	Us	e for ErP		
charger plu	oower supply / ugged in the wall disconnected from	W	0.26 W	<i>0.38</i> W				L
TEC Typical En	ergy Consumption	kWh/week	kWh/week	kWh/week				\boxtimes
Etec * Annual En	ergy Consumption	11:42.73,12:36.4 2 kWh/year	11:41.40,12:36.5 6 kWh/year	<i>l1:42.55,l2:37.6</i> <i>0</i> kWh/year	TSL	ec = (8760/1000) x (Poff × Toff + Psleep leep + Plong_idle × Tlong_idle + Pshort_idle hort_idle)		
Display res	solution : 1366 x 2	768 Pixels						
Print Spee	ed :	Images per mi	nute					\mathbf{X}
Default tim	ne to enter energy s	ave mode: 20 minu	ites					
P9.2*	Information about	the energy save fu	nction is provided	with the product]	
P9.3*		s the energy require version: <i>Version</i> (m/s:		
P10	Emissions							
		- Declared accordin	ng to ISO 9296					
P10.1	Mode	Mode description		Declare A-weigh		Declared A-weighted sound pressure level L_{pAm} (dB)		
				sound po	wer			
				level L_{WA}	d (B)	Operator position Bystander position Desktop (only if product is n or Desk side (only if product is n	_ ot	
	Idle	* HDD: Idle		* 3.2		operator attende	u)	
	Operation	* HDD: Operating		* 4.0		28		F
	Other mode							_
	Measured accord	ing to: 🔀 ISO7779 Other		not covered by E	CMA-	-74 with L _{pAm} measurement distance		
		m)				P		

Model nu	umber *	ThinkPad X230/X230i M/T: 2306/2320/2322/2324/	2325/2;	330/2:	333	
Issue date *		2014, June 17 Logo		eno	VO .	
Product	t environr	mental attributes - Market requirements (continued)	F	equire	ment	met
Item				Yes	No	n.a.
	Chemic	al emissions from printing products				
P10.3*	Test per	formed according to ECMA-328 (ISO/IEC 28360) standard 🗌, other specify:				\boxtimes
P10.4	Typical e	emission rate (print phase) is (mg/h):				\mathbf{X}
		Dust Ozone Styrene Benzene TVOC				
P10.5		al emission requirements of the following voluntary program/s are met for : DustOzoneStyreneBenzeneTVOC				\boxtimes
		magnetic emissions				
P10.6	Comput	or display meets the requirement for low frequency electromagnetic fields of the following values: M/s: MPR-II(3 pin AC adapter only)	oluntary			
P11		nable materials for printing products				
P11.1*	A Safety	/ Data Sheet (SDS) is available for the ink/toner preparation, even if not legally required (se	e P4.3).			\square
P11.2*	Paper c EN1228	ontaining post-consumer recycled fibers can be used, provided that it meets the requi	rements of			
P11.3*	2-sided	(duplex) printing/copying is an integrated product function.				\boxtimes
P12	Ergono	mics for computing products				
P12.1*	The disp	play meets the ergonomic requirements of ISO 9241-307 for visual display technologies.				
P12.2*	The phy	sical input device meets the requirements of ISO 9995 and ISO 9241-410.			Ē	Ħ
P13	Packag	ing and documentation				
P13.1*	Product Product Product	packaging material type(s): Corrugated cardboard weight (kg): 0.41 weight (kg): 0.30 packaging material type(s): Others (plastic bags) weight (kg): 0.04 plastic packaging is free from PVC.				
				\mathbf{X}		⊢⊢
P13.3*		media for user and product documentation (tick box): nic 🔀, Paper 🔀, Other 📃				
P13.4*	For pape	er user and product documentation, please specify contained percentage of post-consume (Japan only 70%)	recycled			
P14		nal information (See Note B4)				
<u></u>		Supplier makes no representations, guarantees, assurances or warranties whether expres	s or implied	l. regard	ina the	
	informat	ion contained in this document. All information provided by supplier in this document is pro	vided based	d on sup	olier's	
		ge available at the time of completion, and supplier shall have no obligation to update such				tion
		here is approximate and provided for informational purposes only. See a Lenovo Account	Representa	ative for r	nore	
D7 17	informat					
P7.17 P9		t does not contain free TBBPA in printed circuit boards(without components)>25g. ERGY STAR Qualified Notebooks & Tablet Computers for the latest information:				
29		ENGY STAR Qualified Notebooks & Tablet Computers for the latest information: ownloads.energystar.gov/bi/gplist/laptops_prod_list.xls				
	nup://a	ownioaus.energystar.gov/bi/qpiist/iaptops_prog_list.xis				

Note B4: 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 B

Reference	Declaration item
2002/95/EC (ROHS Directive)	P1.1, P4.1
REACH, Annex XVII	P1.6, P1.8, P4.2
REACH, Annex XVII	P1.4
REACH, Annex XVII	P1.2
REACH, Annex XVII	P1.7
REACH, Annex XVII	P1.9
Regulation (EC) No. 2037/2000, 2038/2000, 2039/2000	P1.3
Norwegian regulation relating to restrictions on the use of certain dangerous chemicals 20.12.2002	P1.5
2006/66/EC (Battery and accumulators Directive)	P2.1, P2.2, P2,3, P3.4, P8.1
2006/95/EC (Low Voltage Directive)	P3.1, 3.4
2004/108/EEC (New EMC Directive)	P3.2, 3.4
1999/5/EC (R&TTE Directive)	P3.3, 3.4
"REACH" Regulation (1907/2006), annex VII	P1.10
(EC) No.1272/2008 regulation on classification, labeling and packaging (CLP)	P4.3
REACH article 31, annex II	P4.3
2004/12/EC (Directive on packaging and packaging waste)	P5.1
(97/129/EC) (Commission Decision on Identification System for Packaging Materials	P5.2
2037/2000/EC Regulation on Substances that Deplete the Ozone Layer	P5.3
2002/96/EC (WEEE directive)	P3.4, P6.1
(EC) No.1272/2008 regulation on classification, labeling and packaging (CLP)	P7.19

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 X230/X230i	Logo
Model Number	2306, 2320, 2322, 2324, 2325, 2330, 2333	lenovo
Issue Date	2014, July 1	
Additional information		

P7.1.1	Product environmental attributes	
(d)	year of manufacture:	2014
(e)	E TEC value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics disabled and if the system is tested with switchable graphics mode with UMA driving the display:	s cards (dGfx) are
	Category (according to ErP Lot 3): A Etec: 31.60	
(f)	E TEC value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics enabled:	cards (dGfx) are
	Category (according to ErP Lot 3): Etec:	
(g)	idle state power demand (Watts);	10.08
(h)	sleep mode power demand (Watts);	
(i)	sleep mode with WOL enabled power demand (Watts) (where enabled);	1.42
(j)	off mode power demand (Watts);	
(k)	off mode with WOL enabled power demand (Watts) (where enabled);	0.73
(I)	internal power supply efficiency at 10 %, 20 %, 50 % and 100 % of rated output power (if applicable):	
	10% 20% 50% 100% Average	
(m)	external power supply efficiency (if applicable):	
	10% 20% 50% 100% Average ;	
	or level: V	
(o)	the minimum number of loading cycles that the batteries can withstand (applies only to notebook computers	s): 400
(p-1)	the measurement methodology used to determine information mentioned in points (I) – internal PS efficiency:	SU
	Not applicable	
(p-2)	the measurement methodology used to determine information mentioned in points (m) – external PS efficiency: EPA "Test Method for Calculating the Energy Efficiency of Single-Voltage External AC-DC and AC-A Power Supplies" dated August 11, 2004	
(p-3)	the measurement methodology used to determine information mentioned in points (o) - loadingcycl	es
	batteries: IEC 61960 measurement methodology	

(p-4) the measurement methodology used to determine information mentioned in maximum, idle, sleep, off mo power as defined in Point P9.1 in the Product IT Eco Declaration:						
			GY STAR measurement methodology			
(q)	sequence of steps for achieving a stable condition with respect to power demand::					
	ENERGY STAR measurement methodology					
(r)	description of h	description of how sleep and/or off mode was selected or programmed:				
By selecting sleep and/or off mode thru Windows operating system						
(s)	sequence of events required to reach the mode where the equipment automatically changes to sleep and/or off mode:					
		A	utomati	cally changes to sleep after 20 minutes		
(t)	the 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): 20 minutes					
(u)	(u) the 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)	the length of ti	me before the	display	sleep mode is set to activate after user inactivity (in minutes):	10 minutes	
(w)	(w) information on the energy-saving potential of power management functionality:					
	User inforr	mation describ	ed in Us	ser Guide and Power Manager under ThinkVantage menu in all programs		
(x)	(x) user information on how to enable the power management functionality:					
	User inforr	mation describ	ed in Us	ser Guide and Power Manager under ThinkVantage menu in all programs		
(Z)		upply system, -		test voltage in V and frequency in Hz, — total harmonic distortion of ation and documentation on the instrumentation, set-up and circuits		
			230V, 5	50Hz, Total Harmonic Distortion <2 %		
Addition	Notebook Batter	y Information:				
Yes	No		n/a	This notebook computer is operated by battery/ies that cannot be access by a non-professional user.	sed and replaced	
(Battery replaceal		ittery user laceable)		The battery[ies] in this product cannot be easily repla themselves	iced by users	

Additional information