

## 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 *	Lenovo Global Environmental Affairs Alvin L Carter 1009 Think Place Building 2 / 5F1 Morrisville, North Carolina 27560			
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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 X230s			
Model number *	M/T: 20AH/20A3			
Issue date *	2013,June 03			
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	Requireme	ent met
Item		Yes	No
QC1 *	The company enforces an internal quality control scheme to ensure the correctness of this eco declaration		
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).	l 🔀	

Model number *	ThinkPad X230s	M/T: 20AH/20A3		
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<b>Product</b>	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	$\boxtimes$		
	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).	$\square$		
	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	$\boxtimes$		
	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	$\square$		
	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)			
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).			
	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	$\boxtimes$		
	microgram/cm <sup>2</sup> /week (see legal reference).		ш	ш
	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):	$\boxtimes$		
	http://www.lenovo.com/social_responsibility/us/en/materials.html			
P2	Batteries			
P2.1*	If the product contains a battery or an accumulator, it is labeled with the disposal symbol and if it contains			
1 2.1	more than 0.0005% of mercury (for button cells only) by weight, or more than 0.004% of lead, it shall be		ш	ш
	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)		ш	
P2.3*	Batteries and accumulators are easily removable by either users or service providers (as dependent on the			
	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)	•		
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).	$\square$	П	
P3.2*	The product complies with legally required standards for electromagnetic compatibility (see legal		+	╫
F3.2	reference).			
P3.3*	If product is intended for connection to a public telecom network or contains a radio transmitter, it complies			$\overline{}$
F3.3				
P3.4*	with legally required standards for radio and telecommunication devices (see legal reference).  The product is labeled to show conformance with applicable legal requirements (see legal reference).			
	· · · · · · · · · · · · · · · · · · ·			
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			$\boxtimes$
	legal reference and Note B1).			
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			$\boxtimes$
	product/packaging is adequately labeled and a Safety Data Sheet (SDS) in accordance with these			
	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	d 🔀		
	hexavalent chromium by weight of these together.			
P5.2*	Plastic packaging material is marked according to ISO 11469 referring ISO 1043 (see legal reference).	$\boxtimes$		
P5.3*	The product packaging material is free from ozone depleting substances as specified in the Montrea		$\dashv$	$\dashv$
1 3.3	Protocol (see legal reference).	' 🔼	Ш	Ш
	Comment: Legal reference has no maximum concentration values.			

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

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Product	environmental attributes - Market requirements - 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.			
P6	Treatment information						
P6.1*	Information for recyclers/treatment facilities is available (see legal reference).	$\boxtimes$	Ш				
P7	Design Disassembly, recycling						
P7.1*	Parts that have to be treated separately are easily separable			$\neg \neg$			
P7.2*	Plastic materials in covers/housing have no surface coating.			$\dashv$			
P7.3*	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.	$\overline{X}$	∺	-			
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.	$\square$	∺	╫			
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).		井	-#-			
1 7.0	Product lifetime						
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives		$\overline{}$				
P7.8*	Upgrading can be done using commonly available tools	$\square$	井	-#-			
P7.9.							
	Spare parts are available after end of production for: 5 years						
P7.10	Service is available after end of production for: 5 years						
P7.11*	Material and substance requirements						
P7.11	Product cover/housing material type:  Material type: PC+ABS-FR (40)  Material type: PC-GF45 FR(40)  Material type:						
P7.12	Electrical cable insulation materials of power cables are PVC free.			$\neg$			
P7.13	Electrical cable insulation materials of signal cables are PVC free	$\dashv$		╫			
P7.14	All cover/housing plastic parts >25g are free from chlorine and bromine.		$\stackrel{\square}{\vdash}$	-#			
P7.15	All printed circuit boards (without components) >25g are halogen free. as defined in IEC61249-2-21. (See			<del>-  -</del>			
F7.13	Note B2)						
P7.16	Flame retarded plastic parts >25g in covers / housings are marked according ISO 1043-4: Marking: FR (40)						
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-10-phosphaphenanthrene-10-oxide), CAS #: 35948-25-5						
	Alt. 2 Chemical specifications of flame retardants in printed circuit boards (without components) >25g according ISO 1043-4: <i>FR</i> (40)						
P7.18	Alt. 1 Flame retarded plastic parts >25g contain the following flame retardant substances/preparations in concentrations above 0.1%:						
	Comment: No legal limits exist, this is a market requirement.  1. Chemical name: , CAS #:  2. Chemical name: , CAS #:  3. Chemical name: , CAS #:  Alt. 2						
	Chemical specifications of flame retardants in plastic parts >25g according ISO 1043-4:						
P7.19	Plastic parts >25g are free from flame retardant substances/ preparations above 0.1% classified as R45, R40, R46, R48, R50, R51, R53, R60, R61 and any combination of these (See Note B3)						
P7.20	Of total plastic parts' weight >25g, recycled material content is 0%.						
P7.21	Of total plastic parts' weight >25g, biobased material content is 0%.						
P7.22	Light sources are free from mercury  If mercury is used specify: Number of lamps:  and max. mercury content per lamp:  mg						
P8	Batteries and max. mercury content per lamp.						
P8.1*	Battery chemical composition: Lithium Ion/Lithium Manganese Dioxide						
P8.2	Batteries meet the requirements of the following voluntary program/s: US Call2Recycle, EPBA, JBRC						

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.

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	<mark>environmental at</mark>	tributes - Market	requirements (	continued)		Requirement Yes No	
Item P9							n.a.
9.1	Energy consump	e following power leve	als or energy cons	umntions are re	norted: See P14		
Energy mo	<u> </u>	Power level at 100 V AC			Reference / Standard for ene method *	rgy modes and test	
Peak (On-	·max)	45 W	45 W	45 W	Full load		
Categor	v A						
	- WOL Enabled	W	W	W	Use for ENERGY STAR V5	registration (P <sub>idle</sub> )	
	) - WOL Enabled	W	W	W	Use for ENERGY STAR reg		╁┼
	) - WOL Disabled	W	W	W	Reference	Sieep)	H
	WOL Enabled	W	W	W	Use for ENERGY STAR V5	rogistration/P )	H
	WOL Disabled	W	W	W	Use for ErP	egistiation(F <sub>off)</sub>	H
		VV	VV	VV	OSE IOI EIP		
Categor		1 10/	1 14/	1 14/	Her for ENERGY OTAR VE		
	- WOL Enabled	W	W	W	Use for ENERGY STAR V5		Щ
	) - WOL Enabled	W	W	W	Use for ENERGY STAR V5	registration (P <sub>sleep</sub> )	Щ
	) - WOL Disabled	W	W	W	Reference		
	WOL Enabled	W	W	W	Use for ENERGY STAR V5	registration(P <sub>off</sub> )	
Off (S5) - 1	WOL Disabled	W	W	W	Use for ErP		
EPS No-lo		W	<b>0.144</b> W	0.192 W			
charger plu	oower supply / ugged in the wall						
the produc	disconnected from et.)						
PTEC *	- /	W	W	W			
Typical En	ergy Consumption						
TEC *	oray Consumption	kWh/week	kWh/week	kWh/week			
Typical En	ergy Consumption		KVVII/Week	KVVII/Week			
ETEC * Annual En	ergy Consumption	kWh/year	kWh/year	kWh/year	$E_{TEC} = (8760/1000) \times (P_{off} \times 0.3)$	0.6 + P <sub>sleep</sub> x 0.1 +	
Dioplay ros	polution* : 1266v 7			: Sleep Mode(S3)	- WOL Enabled; P <sub>idle</sub> : Idle State -	WOL Enabled	
		<b>58, 1920x1080</b> Mega <sub>l</sub>	DIXEIS				Ц
Print Spee		nages per minute					
		ave mode: 20 minutes					
P9.2*		the energy save func					
P9.3*	ENERGY STAR®	the energy requirem version: Tier			gram/s:		
P10	Others specify: Emissions						
1 10		Declared according	to ISO 9296				
P10.1		Mode description		Declared	Declared A-w	-	
				A-weighted sound power		əl $L_{pAm}$ (dB)	
				level $L_{WAd}$ (		Bystander positions	
				WAG	Desktop X	only if product is not	
					or Desk side	operator attended)	
	Idle *	Idle mode		* 2.5	19	,	
	Operation '	Operating HDD / 0	CPU	* 2.5/ 3.1	19/26	)	
	Other mode		7				
	Measured according		ECMA-74	rod by ECMA 74	with I - magazrament distan	nco m\	
P10.2	The product meets	Other			with L <sub>pAm</sub> measurement distar	nce m)	
	7.2 The product meets the acoustic noise requirements of the following voluntary program/s:						

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Product	environmental attributes - Market requirements (continued)	equire	ment	met			
Item	·	Yes	No	n.a.			
	Chemical emissions from printing products						
P10.3*	Test performed according to ECMA-328 (ISO/IEC 28360) standard, other specify:			$\boxtimes$			
P10.4	Typical emission rate (print phase) is (mg/h):			$\boxtimes$			
	Dust Ozone Styrene Benzene TVOC						
P10.5	Chemical emission requirements of the following voluntary program/s are met for :			$\boxtimes$			
	Dust Ozone Styrene Benzene TVOC						
	Electromagnetic emissions						
P10.6	Computer display meets the requirement for low frequency electromagnetic fields of the following voluntary program/s:						
P11	Consumable materials for printing products						
P11.1*	A Safety Data Sheet (SDS) is available for the ink/toner preparation, even if not legally required (see P4.3).			$\boxtimes$			
P11.2*	Paper containing post-consumer recycled fibers can be used, provided that it meets the requirements of EN12281.						
P11.3*	2-sided (duplex) printing/copying is an integrated product function.			X			
P12	Ergonomics for computing products						
P12.1*							
P12.2*	The physical input device meets the requirements of ISO 9995 and ISO 9241-410.		Ī	$\overline{\sqcap}$			
P13	Packaging and documentation						
P13.1*	Product packaging material type(s): 80% Recycled Corrugated Cardboard weight (kg): 0.348						
	Product packaging material type(s): 100% Recycled Molded Fiber weight (kg): 0.188						
D40.0*	Product packaging material type(s): <i>Others (plastic bags)</i> weight (kg): <i>0.032</i>						
P13.2*	Product plastic packaging is free from PVC.			<u>Ц</u>			
P13.3*	Specify media for user and product documentation (tick box):						
	Electronic , Paper , Other						
P13.4*	4* For paper user and product documentation, please specify contained percentage of post-consumer recycled fiber: 0%						
P14	Additional information (See Note B4)						
	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 on supplier's						
	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			ion			
	information.						
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 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