

## 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 *	novo Logo				
Company name *	Lenovo				
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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 L540					
Model number *	20AU, 20AV					
Issue date *	2014-06-10					
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	Requireme	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).		

Model nu	umber* ThinkPad L540 MT: 20AU, 10AV				
Issue da		Logo	lenc	<b>DVO</b> .	
Product	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% h chromium, 0.1% polybrominated biphenyls (PBB) or 0.1% polybrominated diphenyl ethelegal reference and Note B1)		e		
P1.2*	Products do not contain Asbestos (see legal reference). Comment: Legal reference has no maximum concentration value.		$\boxtimes$		
P1.3*	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), hydrobromofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetr trichloroethane, methyl bromide (see legal reference). Comment: Legal reference has r concentration values.				
P1.4*	Products do not contain more than; 0.005% polychlorinated biphenyl (PCB), 0.005% po terphenyl (PCT) in preparations (see legal reference).				
P1.5*	Products do not contain more than 0.1% short chain chloroparaffins (SCCP) with 10-13 the chain containing at least 48% per mass of chlorine in the SCCP (see legal reference)		ו 🖂		
P1.6*	Textile and leather parts with direct skin contact do not contain Tri-(2,3,-dibromopropyl)- Tris-(aziridinyl)-phosphineoxide (TEPA), polybrominated biphenyl (PBB) (see legal refer Comment: Legal reference has no maximum concentration values.	-phosphate (TRI	S),		
P1.7*	Textile and leather parts with direct skin contact do not contain more than 0.003% Azo or aromatic amines. (See legal reference and Note B1)	colorants that sp	lit		$\boxtimes$
P1.8*	Wooden parts do not contain arsenic and chromium as a wood preservation treatment a pentachlorophenol and derivatives (see legal reference). Comment: Legal reference has no maximum concentration values.	as well as			
P1.9*	Parts with direct and prolonged skin contact do not release nickel in concentrations abo microgram/cm <sup>2</sup> /week (see legal reference). Comment: Max limit in legal reference when tested according to EN1811:1998.	ove 0.5			
P1.10*	REACH Article 33 information about substances in articles is available at (add URL or n http://www.lenovo.com/social responsibility/us/en/materials.html	mail contact):	$\boxtimes$		
P2	Batteries				
P2.1*	If the product contains a battery or an accumulator, it is labeled with the disposal symbol more than 0.0005% of mercury (for button cells only) by weight, or more than 0.004% o marked with the chemical symbol for the metal concerned, Hg or Pb. Information on proprovided in user manual. (See legal reference)	f lead, it shall be			
P2.2*	Button cells used in the product do not contain more than 2% by weight of mercury. Oth accumulators do not contain more than 0.0005% of mercury or 0.002% of cadmium. (So		ce)		
P2.3*	Batteries and accumulators are easily removable by either users or service providers (a design of the product). Exception: Batteries that are permanently installed for safety, per or data integrity reasons do not have to be "easily removable". (See legal reference)	as dependent on	the 🔀		
P3	Safety, EMC connection to the telephone network and labeling				
P3.1*	The product complies with legally required safety standards as specified (see legal refer	rence).	$\square$		
P3.2*	The product complies with legally required standards for electromagnetic compatibility ( reference).	J. J			
P3.3*	If product is intended for connection to a public telecom network or contains a radio trar with legally required standards for radio and telecommunication devices (see legal refer	rence).			
P3.4*	The product is labeled to show conformance with applicable legal requirements (see leg	gal reterence).			
P4	Consumable materials				
P4.1*	If a photo conductor (drum, belt etc.) is used in the product, it does not contain cadmiun 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	-			$\square$
P4.3*	If the ink/toner formulation/preparation is classified as hazardous according to applicabl product/packaging is adequately labeled and a Safety Data Sheet (SDS) in accordance requirements is available (see legal reference).		e 🗌		
P5	Product packaging				
P5.1*	Packaging and packaging components do not contain more than 0.01% lead, mer hexavalent chromium by weight of these together.	cury, cadmium	and 🔀		
P5.2*	Plastic packaging material is marked according to ISO 11469 referring ISO 1043 (see le	egal reference).	$\boxtimes$		
P5.3*	The product packaging material is free from ozone depleting substances as specif Protocol (see legal reference). Comment: Legal reference has no maximum concentration values.	fied in the Mon	treal 🔀		

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

	umber *	ThinkPad L540 MT: 20AU, 10AV			
lssue da	ate *	2014-06-102014-6-10 Logo	lend	<b>vvo</b>	
Produc	t environ	mental attributes - Market requirements - Environmental conscious design	Require	ment	met
Item		atory to fill in. Additional information regarding each item may be found under P14.	Yes	No	n.a
P6		nt information			
P6.1*	Informat	ion for recyclers/treatment facilities is available (see legal reference).			
P7	Design	mbly, recycling			
P7.1*		thave to be treated separately are easily separable			
P7.2*		naterials in covers/housing have no surface coating.			
P7.3*		arts >100g consist of one material or of easily separable materials.			
P7.4*	-	arts >25g have material codes according to ISO 11469 referring ISO 1043.		╞	
<sup>7.4</sup>		arts are free from metal inlays or have inlays that can be removed with commonly available to		-	
7.6*		re easily separable. (This requirement does not apply to safety/regulatory labels).		<u> </u>	
-7.0	_				
P7.7*		lifetime ng can be done e.g. with processor, memory, cards or drives			_
P7.8*		ig can be done using commonly available tools		-	
P7.9.	10				
P7.10		arts are available after end of production for: 5 years			
-7.10		s available after end of production for: 5 years			
P7.11*		and substance requirements cover/housing material type:			
-7.11		6 <i>H</i>	D1615		
97.12		type: PC+ABS-FR(40) Material type: PCABS501eFR Material type: TM I cable insulation materials of power cables are PVC free.			
P7.12		I cable insulation materials of signal cables are PVC free	<u> </u>		
P7.13		/housing plastic parts >25g are free from chlorine and bromine.			
P7.14 P7.15				<u> </u>	
	Note B2		(See 🔀		
P7.16	Flame re Marking:	etarded plastic parts >25g in covers / housings are marked according ISO 1043-4: FR(40)	$\square$		
P7.17	Alt. 1				
		Il specifications of flame retardants in printed circuit boards >25g (without components): additive) , TBBPA (reactive) , Other; chemical name: <i>DOPO</i> , CAS #: 35948-25-5			L
	Alt. 2 Chemica	I specifications of flame retardants in printed circuit boards (without components) >25g accord	ding 🔀		_
		3-4: <b>FR(40)</b>			
P7.18	Alt. 1 Flame r	etarded plastic parts >25g contain the following flame retardant substances/preparatio	ins in 🔀		Г
	concentr	ations above 0.1%:			
		ent: No legal limits exist, this is a market requirement.			
		ical name: , CAS #:			
		ical name: , CAS #: ical name: , CAS #:			
	Alt. 2	ical name: , CAS #:			
		I specifications of flame retardants in plastic parts >25g according ISO 1043-4:	_	_	_
D7 10	FR(40)			<u> </u>	
P7.19	Plastic p R40, R4	arts >25g are free from flame retardant substances/ preparations above 0.1% classified as R4 6, R48, R50, R51, R53, R60, R61 and any combination of these (See Note B3)	,5, 🔀		L
P7.20		plastic parts' weight >25g, recycled material content is 13.5%.			
P7.21		plastic parts' weight >25g, biobased material content is 0%.			
P7.22		Irces are free from mercury	$\boxtimes$		
P8	It mercu Batterie	y is used specify: Number of lamps: and max. mercury content per lamp: mg			_
0					_
P8.1*	Batterv o	chemical composition: Lithium Ion/Lithium Manganese Dioxide			

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 *	ThinkP	ad L540	MT: 204	U, 10AV		
	014-06-102				Logo	ovo
Product environme	ental attrib	utes - Market	requirements	(continued)	Begui	rement met
Item				(*******	Ye	
•••	nsumption					
9.1 For the pro	duct the foll	owing power leve	els or energy con	sumptions are re	ported: See P14	
Energy mode *				Power level at	Reference / Standard for energy modes	and test
Peak (On-max)		100 V AC 5 W	115 V AC 65 W	230 V AC 65 W	method *	— I —
Category I1			00 11	00 11	1 un loud	
Short Idle State - WO	L Enabled	10.764 W	10.632 W	11.196 W	Use for ENERGY STAR V6 registration	1 (P <sub>idle</sub> )
Long Idle State - WOI		8.832 W	8.640 W	8.568 W	Use for ENERGY STAR V6 registration	1
Sleep (S3) - WOL Ena		0.660 W	0.660 W	0.720 W	Use for ENERGY STAR V6 registration	
Sleep (S3) - WOL Dis		W	W	W	Reference	
Off (S5) - WOL Enable		0.288 W	0.300 W	0.300 W	Use for ENERGY STAR V6 registration	
Off (S5) - WOL Disabl	led	W	W	W	Use for EuP	
Category I2						
Short Idle State - WO	L Enabled	10.368 W	10.812 W	11.220 W	Use for ENERGY STAR V6 registration	1(P <sub>idle</sub> )
Long Idle State - WOI	L Enabled	<i>8.748</i> W	8.628 W	9.084 W	Use for ENERGY STAR V6 registration	n(P <sub>idle</sub> )
Sleep (S3) - WOL Ena	abled	0.672 W	0.672 W	0.756 W	Use for ENERGY STAR V6 registration	1 (P <sub>sleep</sub> )
Sleep (S3) - WOL Disa	abled	W	W	W	Reference	
Off (S5) - WOL Enable		0.312 W	0.312 W	0.360 W	Use for ENERGY STAR V6 registration	
Off (S5) - WOL Disabl	led	W	W	W	Use for EuP	
Category I3						
Short Idle State - WO	L Enabled	10.464 W	<b>11.736</b> W	<b>10.440</b> W	Use for ENERGY STAR V6 registration	1(P <sub>idle</sub> )
Long Idle State - WOI	L Enabled	7.188 W	<b>8.400</b> W	8.388 W	Use for ENERGY STAR V6 registration	I(P <sub>idle</sub> )
Sleep (S3) - WOL Ena	abled	0.660 W	0.660 W	<b>0.732</b> W	Use for ENERGY STAR V6 registration	1 (P <sub>sleep</sub> )
Sleep (S3) - WOL Dis	abled	W	W	W	Reference	
Off (S5) - WOL Enable	ed	0.288 W	0.288 W	0.372 W	Use for ENERGY STAR V6 registration	I(P <sub>off</sub> )
Off (S5) - WOL Disabl	led	0.28 W	0.28 W	0.35 W	Use for EuP	
EPS No-load		0.079 W	0.084 W	0.125 W		
PTEC *		W	W	W		
TEC * ETEC *		11:38.68,	<i>I1:38.19</i> ,	l1:39.92,	$E_{TEC} = (8760/1000) \times (P_{off} \times 0.25 + P_{sleep})$	x 0 35
Annual Energy Consur	nption	12:37.65,	12:38.72,	12:40.55,	$+ P_{long_{ldle}} \times 0.10 + P_{short_{ldle}} \times 0.30)$	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		13:36.45	13:40.85	13:37.84		
		kWh/year Poff: Off Mode(S:	kWh/year 5) - WOL Enabled;	kWh/year Psleep: Sleep Mode(	S3) - WOL Enabled; P <sub>idle</sub> : Idle State - WOL En	abled
Display resolution* : 1	366x768 Me					
Print Speed * :	Image	es per minute				
Default time to enter er	nergy save r	mode: <b>Batter</b> j	v mode∶10mins,	AC mode: 20min	18	
P9.2* Information	n about the e	energy save func	tion is provided w	vith the product.		
				ving voluntary pro	gram/s:	
		ion: Version 6.0	dated June 2, 2	014 Tier:	Product category: 11, 12, 13	
Others spe						
P10 Emissions Noise emi		clared according	to ISO 9296			
P10.1 Mode		e description		Declared	Declared A-weighted	
				A-weighted sound powe		B)
				level $L_{WAd}$ (		ositions
					Desktop	$\square$
					or Desk side 🗌 (only if produ	
Idle	* <b>H</b>	DD:Idle		* 3.0	21 18	
Operation	* <b>H</b>	DD: Operating		* 4.0	32 22	
Other mod	е					
Measured	according to		ECMA-74			
		Other				n)
P10.2 The produc	ct meets the	acoustic noise r	equirements of th	ne following volunt	ary program/s:	

Model nur	mber *	ThinkPad L540 MT: 20AU, 10AV				
Issue date	*	2014-06-102014-6-10 Lo	go	leno	10	
Product	environn	nental attributes - Market requirements (continued)	F	Require	ment	met
Item				Yes	No	n.a.
	Chemica	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):				$\square$
		Dust Ozone Styrene Benzene TVOC				_
P10.5		Il emission requirements of the following voluntary program/s are met for : Dust  Ozone  Styrene  Benzene  TVC				$\boxtimes$
		nagnetic emissions				
P10.6		er display meets the requirement for low frequency electromagnetic fields of the followi /s: <b>MPR-II</b> (3 pin AC adapter only)	ng voluntary	$\boxtimes$		
P11	Consum	able materials for printing products				
P11.1*	A Safety	Data Sheet (SDS) is available for the ink/toner preparation, even if not legally required	l (see P4.3).			$\boxtimes$
P11.2*	Paper co EN1228	ontaining post-consumer recycled fibers can be used, provided that it meets the re	equirements of			$\square$
P11.3*	2-sided (	duplex) printing/copying is an integrated product function.				Х
P12		nics for computing products				
P12.1*	The disp	lay meets the ergonomic requirements of ISO 9241-307 for visual display technologies	6.	$\boxtimes$		
P12.2*	The phys	sical input device meets the requirements of ISO 9995 and ISO 9241-410.		$\boxtimes$		
P13	Packagi	ng and documentation				
P13.1*	Product Product	packaging material type(s): <i>Corrugated cardboard</i> weight (kg): <i>0.52</i> packaging material type(s): <i>Polyethylene(RLDPE)</i> weight (kg): <i>0.32</i> packaging material type(s): <i>Others(Plastic Bags)</i> weight (kg): <i>0.02</i>				
P13.2*	Product	plastic packaging is free from PVC.		$\boxtimes$		
P13.3*		nedia for user and product documentation (tick box):				
	Electroni	c 🔀, Paper 🔀, Other 📃				
P13.4*	For pape fiber: 0	er user and product documentation, please specify contained percentage of post-consu %	imer recycled			
P14		al information (See Note B4)				
	informati knowledg provided informati		provided base such informatio	d on sup n. The in	plier's forma	
P9		rgy Star Qualified Notebooks & Tablet Computers for the latest information: ww.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&p	gw_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

## 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 L540	Logo
Model Number	20AU, 20AV	
Issue Date	2014/7/24	lenovo
Additional information		

P7.1.1	Product environmental attributes	
(d)	year of manufacture:	
	·	2014
(e)	<b>E TEC value</b> (kWh) per ErP Lot 3 Category and capability adjustments applied when <b>all discrete graphics ca disabled</b> and if the system is tested with switchable graphics mode with UMA driving the display:	rds (dGfx) are
	Category (according to ErP Lot 3): A Etec: 13.89	
(f)	E TEC value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics can enabled:	ds (dGfx) are
	Category (according to ErP Lot 3): N/A Etec: N/A	
(g)	idle state power demand (Watts);	4.11
(h)	sleep mode power demand (Watts);	0.71
(i)	sleep mode with WOL enabled power demand (Watts) (where enabled);	0.71
(j)	off mode power demand (Watts);	0.47
(k)	off mode with WOL enabled power demand (Watts) (where enabled);	0.47
(I)	internal power supply efficiency at 10 %, 20 %, 50 % and 100 % of rated output power (if applicable):	
	10% N/A 20% N/A 50% N/A 100% N/A Average N/A	
(m)	external power supply efficiency (if applicable):	
	10% 85.95% 20% 88.55% 50% 89.12% 100% 88.47% Average 88.07%;	
(2)	or level: V	
(0)	the minimum number of loading cycles that the batteries can withstand (applies only to notebook computers):	300
(p-1)	the measurement methodology used to determine information mentioned in points (I) - internal PSU efficiency:	
	N/A	
(p-2)	the measurement methodology used to determine information mentioned in points (m) - external PSU efficiency:	
	The adapter efficiency (watts output/watts input) shall be more than 87.0% (minimum) that is the average value of 25%, 50%, 75% and 100% load with both 115Vac and 230Vac input voltage condition.	
(p-3)	the measurement methodology used to determine information mentioned in points (o) - loadingcycles batteries:	

Retain 68 % of Cmin (300 cycle) Discharge : 0.5C(EDV= 9V)									
	the 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:								
	IEC 62301								
(q) sequence	of steps for achievin	g a stab	le condition with respect to power demand ::						
	1	Power o	n -> Wait 5 minutes ->Stable condition						
(r) description	n of how sleep and/o	r off moo	de was selected or programmed:						
	B	egin me	nu -> Power -> Select sleep or off mode						
(s) sequence off mode:	of events required to	o reach t	he mode where the equipment automatically changes to sleep and/or						
Со	ntrol Panel->Power	r Option	s-> Change Settings-> Restore default settings for this plan						
			efore the computer automatically reaches sleep mode, or another oplicable power demand requirements for sleep mode (in minutes):	30 minutes					
			ser inactivity in which the computer automatically reaches a demand requirement than sleep mode (in minutes):	45 minutes					
(v) the length	(v) the length of time before the display sleep mode is set to activate after user inactivity (in minutes): 15 minutes								
(w) information	n on the energy-savi	ng poter	tial of power management functionality:						
			N/A						
(x) user inform	nation on how to ena	able the	power management functionality:						
			Refer to User Guide						
the electric			test voltage in V and frequency in Hz, — total harmonic distortion of ation and documentation on the instrumentation, set-up and circuits						
			230V/50Hz						
Addition Notebook B	attery Information:								
Yes	No	n/a	This notebook computer is operated by battery/ies that cannot be acces by a non-professional user.	sed and replaced					
(Battery <b>not</b> user replaceable)	(Battery user replaceable)		The battery[ies] in this product cannot be easily repla themselves	ced by users					

Additional information							