

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						
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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 *	otebook PC						
Commercial name *	ThinkPad Edge E545						
Model number *	MT: 20B2						
Issue date *	March 25, 2013						
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 nu	umber *	ThinkPad Edge E545 M/T:20B2				
Issue da	te *		Logo	leno	vo	
Product	tenviron	mental attributes - Legal requirements		Require	ment	met
Item				Yes	No	n.a.
P1	Hazardo	ous substances and preparations				
P1.1*	Products chromiu	s do not contain more than; 0.1% lead, 0.01% cadmium, 0.1% mercury, 0.1% hexav m, 0.1% polybrominated biphenyls (PBB) or 0.1% polybrominated diphenyl ethers (I				
P1.2*	Products	erence and Note B1) s do not contain Asbestos (see legal reference). nt: Legal reference has no maximum concentration value.				
P1.3*	Products hydrobro trichloro	s do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), somofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachl ethane, methyl bromide (see legal reference). Comment: Legal reference has no m ration values.				
P1.4*	Products	s do not contain more than; 0.005% polychlorinated biphenyl (PCB), 0.005% polychl rl (PCT) in preparations (see legal reference).	lorinated	\boxtimes		
P1.5*	Products	oon atoms in	\boxtimes			
P1.6*	Textile a Tris-(azi	n containing at least 48% per mass of chlorine in the SCCP (see legal reference). Ind leather parts with direct skin contact do not contain Tri-(2,3,-dibromopropyl)-phos ridinyl)-phosphineoxide (TEPA), polybrominated biphenyl (PBB) (see legal reference nt: Legal reference has no maximum concentration values.		,		
P1.7*	Textile a	nd leather parts with direct skin contact do not contain more than 0.003% Azo color a amines. (See legal reference and Note B1)	ants that split			\boxtimes
P1.8*	Wooder pentach	parts do not contain arsenic and chromium as a wood preservation treatment as w lorophenol and derivatives (see legal reference). nt: Legal reference has no maximum concentration values.	ell as			
P1.9*	Parts wi microgra	th direct and prolonged skin contact do not release nickel in concentrations above 0 am/cm ² /week (see legal reference).	.5			
P1.10*	REACH	nt: Max limit in legal reference when tested according to EN1811:1998. Article 33 information about substances in articles is available at (add URL or mail of ww.lenovo.com/social responsibility/us/en/environment.html	contact):			
P2	Batterie					
P2.1*	If the pro more tha marked provideo	oduct contains a battery or an accumulator, it is labeled with the disposal symbol an an 0.0005% of mercury (for button cells only) by weight, or more than 0.004% of lea with the chemical symbol for the metal concerned, Hg or Pb. Information on proper I in user manual. (See legal reference)	d, it shall be disposal is			
P2.2*		ells used in the product do not contain more than 2% by weight of mercury. Other b lators do not contain more than 0.0005% of mercury or 0.002% of cadmium. (See le				
P2.3*	design c	s and accumulators are easily removable by either users or service providers (as de if the product). Exception: Batteries that are permanently installed for safety, perfore ntegrity reasons do not have to be "easily removable". (See legal reference)				
P3		EMC connection to the telephone network and labeling				
P3.1*	The proc	duct complies with legally required safety standards as specified (see legal reference	e).	\square		
P3.2*	referenc		0			
P3.3*	with lega	ct is intended for connection to a public telecom network or contains a radio transmit ally required standards for radio and telecommunication devices (see legal reference	e).	s 🔀		
P3.4*	The pro	duct is labeled to show conformance with applicable legal requirements (see legal re	eterence).	\square		
P4		nable materials				
P4.1*	legal ref	o conductor (drum, belt etc.) is used in the product, it does not contain cadmium ma erence and Note B1).	`			
P4.2*		er is used in the product, it does not contain cadmium max 0.1% by weight (see leg	,			\square
P4.3*	product/	/toner formulation/preparation is classified as hazardous according to applicable req packaging is adequately labeled and a Safety Data Sheet (SDS) in accordance with nents is available (see legal reference).				\boxtimes
P5	Product	t packaging				
P5.1*	Packagi	ng and packaging components do not contain more than 0.01% lead, mercury ent chromium by weight of these together.	, cadmium ar	nd 🔀		
P5.2*	Plastic p	backaging material is marked according to ISO 11469 referring ISO 1043 (see legal	reference).	\boxtimes		
P5.3*	Protocol	duct packaging material is free from ozone depleting substances as specified (see legal reference). nt: Legal reference has no maximum concentration values.	in the Montre			

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

	umber *	ThinkPad Edge E545 M/T:20B2					
lssue da	te *	Manah 05, 0040	lenc	DVO .			
Produc	t environ	mental attributes - Market requirements - Environmental conscious design	Require	ment m			
tem		tory to fill in. Additional information regarding each item may be found under P14.	Yes		n.a		
P6		nt information	100	110			
P6.1*	Informati	on for recyclers/treatment facilities is available (see legal reference).					
P7	Design						
P7.1*		nbly, recycling t have to be treated separately are easily separable					
⁹ 7.2*	Plastic m	aterials in covers/housing have no surface coating.	Ē		F		
P7.3*	Plastic pa	arts >100g consist of one material or of easily separable materials.			F		
P7.4*		arts >25g have material codes according to ISO 11469 referring ISO 1043.			F		
P7.5		arts are free from metal inlays or have inlays that can be removed with commonly available tools.			╞		
P7.6*		e easily separable. (This requirement does not apply to safety/regulatory labels).			╞		
17.0							
P7.7*	Product	g can be done e.g. with processor, memory, cards or drives			-		
P7.8*		g can be done using commonly available tools			╞		
				L			
P7.9.		rts are available after end of production for: 5 years	_				
P7.10		s available after end of production for: 5 years					
		and substance requirements					
P7.11*		cover/housing material type:					
P7.12		ype: PC+ABS-FR(40) Material type: cable insulation materials of power cables are PVC free. Material type:			_		
		cable insulation materials of signal cables are PVC free	<u> </u>		Ļ		
P7.13				L			
P7.14	All cover/						
P7.15	All printed circuit boards (without components) >25g are halogen free. as defined in IEC61249-2-21. (Se Note B2)						
P7.16	Flame re Marking:						
P7.17	TBBPA (I specifications of flame retardants in printed circuit boards >25g (without components): additive) , TBBPA (reactive) , Other; chemical name: <i>9,10-dihydro-9-oxa-10- aphenanthrene-10-oxide</i> , CAS #: <i>35948-25-5</i>					
	ISO 1043	l specifications of flame retardants in printed circuit boards (without components) >25g according 3-4: FR(40)					
P7.18		etarded plastic parts >25g contain the following flame retardant substances/preparations ir ations above 0.1%:	ו 🔀				
	Provide a complete 1. Chemi 2. Chemi 3. Chemi Alt. 2	t: No legal limits exist, this is a market requirement. a list of all used flame retardants including MSDS for each flame retardant. The list must contain chemical name, CAS number and supplier. cal name: <i>TMB1615</i> , CAS #: <i>confidential</i> , Supplier: <i>Mitsubishi</i> cal name: <i>FR3002</i> , CAS #: <i>confidential</i> , Supplier: <i>BAYER</i> cal name: <i>GC1150</i> , CAS #: <i>confidential</i> , Supplier: <i>Sabic</i> I specifications of flame retardants in plastic parts >25g according ISO 1043-4:					
P7.19		arts >25g are free from flame retardant substances/ preparations above 0.1% classified as R45,					
P7.20		5, R48, R50, R51, R53, R60, R61 and any combination of these (See Note B3)					
P7.20 P7.21		lastic parts' weight >25g, recycled material content is 10.69 % . lastic parts' weight >25g, biobased material content is 0 %.					
P7.21		rces are free from mercury					
		· · · · · · · · · · · · · · · · · · ·					
P8	Batteries	hemical composition: Li-ion			-		
P8.1*							

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 nu	umber *	Thin	kPad Edge	E545 M/T	:20 B 2		
Issue dat		March 2				Logo lenovo .	
Product	environme	ental at	tributes - Market	requirements (c	ontinued)	Requirement	me
Item				•	,	Yes No	n.a
P9	Energy co			· .			
9.1			e following power lev oped w/ WOL Enable		mptions are reporte	ed:	
Energy mode * Peak (On-max)			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-max)		65/90W	65/90W	65/90W	Full load	
Catego	ry A						
Idle State	e - WOL Ena	bled	W	W	W	Use for ENERGY STAR Registration (Pidle)	\times
Sleep (S3) - WOL Enabled		abled	W	W	W	Use for ENERGY STAR Registration (Psleep)	$\mathbf{\Sigma}$
Sleep (SS	3) - WOL Dis	abled	W	W	W	Reference	\geq
Off (S5) -	WOL Enabl	led	W	W	W	Use for ENERGY STAR Registration (Poff)	
Off (S5) -	WOL Disab	led	W	W	W	Use for EuP	$\mathbf{\mathbf{x}}$
Catego	ry B						
Idle State	e - WOL Ena	bled	9.242 W	<i>9.208</i> W	<i>9.430</i> W	Use for ENERGY STAR Registration (P _{idle})	
Sleep (St	3) - WOL Ena	abled	1.088 W	1.091 W	1.178 W	Use for ENERGY STAR Registration (Psleep)	
Sleep (St	3) - WOL Dis	abled	1.055W	1.057W	1.130W	Reference	
Off (S5) -	WOL Enabl	led	0.418 W	0.423 W	<i>0.495</i> W	Use for ENERGY STAR Registration (Poff)	
Off (S5) -	WOL Disab	led	<i>0.388</i> W	0.391W	<i>0.439</i> W	Use for EuP	
EPS No-le	oad		0.082 W	0.089 W	0.158 W		
charger p outlet but the produ	power supply lugged in the disconnected ct.)	wall					
TEC Typical Ei	nergy Consu	mption	kWh/week	kWh/week	kWh/year	Energy Star	L_
Etec * Annual Er	nergy Consu	mption	27.439kWh/year	27.378kWh/year	28.416kWh/year	$E_{TEC} = (8760/1000) \times (P_{off} \times 0.6 + P_{sleep} \times 0.1 + P_{idle} \times 0.3)$	
			Poff: Off Mode(S5) -	WOL Enabled; P _{sleep} :	Sleep Mode(S3) - WO	L Enabled; P _{idle} : Idle State - WOL Enabled	<u> </u>
Display re	esolution :	1024*60	Megapixels			Specification	
				to			
Print Spee		porav sa	Images per minu ave mode: 10(to disp		minutos	Energy star	
P9.2*			the energy save fund				╘
P9.3*	The produ	ct meets	the energy requirer version:5.2 Product	nents of the followin	g voluntary program		
	Others spe	ecify:		Calegory. Noteboo	ik computer		
P10	Emission Noise em		Declared according	to ISO 9296			
P10.1	Mode		Node description		Declared	Declared A-weighted	
					A-weighted sound power	sound pressure level $L_{p{\rm Am}}$ (dB)	
					level L_{WAd} (B)	Operator position Bystander positions Desktop or Desk side (only if product is not operator attended)	
	Idle	*	System idle		* 2.9	19.8	
	Operation	*	CPU loading >90%	6	* 3.2	19.8	
	Other mod		ODD operating		4.7		
	Measured	accordir	Other		covered by ECMA-7	4 with L_{pAm} measurement distance	
P10.2	The produ	ct moote	m) the acoustic noise	requirements of the	following voluntary	program/s:	<u> </u>
	ine piedu				y voluntaly		

Model nu	mber *	ThinkPad Edge E545 M/T:20B2							
Issue date	e *	March 25, 2013	Logo	leno	VO.				
Product	environr	nental attributes - Market requirements (continued)		Require	ment	met			
Item				Yes	No	n.a.			
	Chemica	al emissions from printing products							
P10.3*		formed according to ECMA-328 (ISO/IEC 28360) standard , other specify:				\square			
P10.4		emission rate (print phase) is (mg/h):							
		Dust Ozone Styrene Benzene TVOC							
P10.5		Il emission requirements of the following voluntary program/s are met for :				\boxtimes			
	Electron	nagnetic emissions							
P10.6	Compute	er display meets the requirement for low frequency electromagnetic fields of the follo	owing voluntary	\boxtimes					
	<u> </u>	's: SDRRS							
P11	Consum	able materials for printing products							
P11.1*		Data Sheet (SDS) is available for the ink/toner preparation, even if not legally requ							
P11.2*	Paper containing post-consumer recycled fibers can be used, provided that it meets the requirements of D								
P11.3*	2-sided (duplex) printing/copying is an integrated product function.				\boxtimes			
P12		nics for computing products							
P12.1*	The disp	lay meets the ergonomic requirements of ISO 9241-307 for visual display technolog	gies.			\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	packaging material type(s): carton & paper pad packaging material type(s): paper cushionweight (kg): 0.62 weight (kg): 0.235 weight (kg): 0.025							
P13.2*	Product	plastic packaging is free from PVC.		\times					
P13.3*	Specify I	nedia for user and product documentation (tick box):							
	Electron	c 🔀, Paper 🔀, Other 🗌							
P13.4*		er user and product documentation, please specify contained percentage of post-co	nsumer recycled	d					
		0% (Japan only 70%)							
P14		al information (See Note B4)							
	informati knowledg provided informati		t is provided ba te such informa ccount Represe	sed on sup tion. The in	plier's format				
P7.17		does not contain free TBBPA in printed circuit boards(without components)							
P9		ERGY STAR Qualified Notebooks & Tablet Computers for the latest informatio ownloads.energystar.gov/bi/qplist/laptops_prod_list.xls	n:						

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 Edge E545	Logo
Model Number	20B1	_
Issue Date	2014/07/21	lenovo
Additional information		

(d)	year of ma	anufacture:						2013	
(e)							I when all discrete gra Iriving the display:	ohics cards (dGf	x) are
	Category	(according t	o ErP Lot 3):	A E	tec: 23.87				
(f)	E TEC va enabled:	lue (kWh) per	[.] ErP Lot 3 Ca	tegory and cap	bability adjustmen	s applied	when all discrete grap	hics cards (dGfx	() are
	Category	(according t	o ErP Lot 3):	B Etec: 20	6.79				
(g)	idle state	power deman	d (Watts);					A: 8.41/ B: 8	3.93
(h)	sleep moo	de power dem	and (Watts);					NA	
(i)	sleep mode with WOL enabled power demand (Watts) (where enabled);						A: 0.91/ B:1.03		
(j)	off mode	power deman	d (Watts);					NA	
(k)	off mode	with WOL ena	bled power de	emand (Watts)	(where enabled);			A: 0.32/ B:0).46
(I)	internal po	ower supply e	fficiency at 10	%, 20 %, 50 %	6 and 100 % of ra	ted output	power (if applicable):		
	10%	20%	50%	100%	Average				
(m)	external p	ower supply e	fficiency (if ap	plicable):					
	10%	20%	50%	100%	Average	;			
	or level: C	COMPAL mee	t Level V						
(0)				es that the batt	eries can withstan	d (applies	only to notebook comp	,	V/A
(p-1)	the meas efficiency		hodology use	ed to determin	ne information m	entioned	in points (I) – interna	I PSU	
					NA				
(p-2)	the meas efficiency		hodology use	d to determin	e information me	entioned in	n points (m) – externa	al PSU	
	-			Energy-s	tar requirement				
(p-3)	the meas	urement met	hodology use	ed to determin	ne information m	entioned i	in points (o) – loading	acycles	

	batteries:		NA (E	rP ot 3 test isn't contained Batteries)	
(n 1)	the measure	romant mathadalag		,	
(p-4)				o determine information mentioned in maximum, idle, sleep, off mode Product IT Eco Declaration:	
				Energy-star requirement	
(q)	sequence of	of steps for achievin	g a stab	le condition with respect to power demand::	
				Based on user manual	
(r)	description	of how sleep and/o	r off mo	de was selected or programmed:	
				Based on user manual	
(s)	sequence of mode:	of events required to	reach t	he mode where the equipment automatically changes to sleep and/or	
				Based on user manual	
(t)				pefore the computer automatically reaches sleep mode, or another pplicable power demand requirements for sleep mode (in minutes):	20
(u)				ser inactivity in which the computer automatically reaches a demand requirement than sleep mode (in minutes):	15
(v)	the length	of time before the	display	sleep mode is set to activate after user inactivity (in minutes):	10
(w)	information	on the energy-savi	ng poter	tial of power management functionality:	
				Based on user manual	
(x)	user inform	ation on how to ena	ble the	power management functionality:	
				Based on user manual	
(z)	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	n Notebook Ba	attery Information:			
Yes		No	n/a	This notebook computer is operated by battery/ies that cannot be access by a non-professional user.	ed and replaced
(Battery replacea		(Battery user replaceable)		The battery[ies] in this product cannot be easily replace themselves	ed by users
		\boxtimes			

Additional information							