

## 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 *	Lenovo	Logo		
Company name *	Lenovo			
Contact information *	novo Global Environmental Affairs in L Carter 19 Think Place Ilding 2 / 5F1 rrisville, 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 *	Lenovo E40-80			
Model number *	20381,80ER;20445,80HR			
Issue date *	2015-01-16			
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 F	Requireme	nt 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).		

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Issue date *	2015-01-16	Logo	lenovo

<b>Product</b>	oduct environmental attributes - Legal requirements				
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).  Comment: Legal reference has no maximum concentration value.				
P1.3*	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), 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 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 the chain containing at least 48% per mass of chlorine in the SCCP (see legal reference).	$\boxtimes$			
P1.6*	Textile and leather parts with direct skin contact do not contain Tri-(2,3,-dibromopropyl)-phosphate (TRIS), 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 aromatic amines. (See legal reference and Note B1)			$\boxtimes$	
P1.8*	Wooden parts do not contain arsenic and chromium as a wood preservation treatment as well as 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 microgram/cm²/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): 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 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 accumulators do not contain more than 0.0005% of mercury or 0.002% of cadmium. (See legal reference)	$\boxtimes$			
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).	$\boxtimes$	$\Box$		
P3.2*	The product complies with legally required standards for electromagnetic compatibility (see legal reference).				
P3.3*	If product is intended for connection to a public telecom network or contains a radio transmitter, it complies 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).	$\boxtimes$		П	
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).				
P4.2*	If ink/toner is used in the product, it does not contain cadmium max 0.1% by weight (see legal reference).		$\overline{}$	$\overline{\square}$	
P4.3*	If the ink/toner formulation/preparation is classified as hazardous according to applicable regulations, the 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 hexavalent chromium by weight of these together.	d 🔀			
P5.2*	Plastic packaging material is marked according to ISO 11469 referring ISO 1043 (see legal reference).	$\boxtimes$	$\Box$	П	
P5.3*	The product packaging material is free from ozone depleting substances as specified in the Montrea Protocol (see legal reference).  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 Rec	quirer	nent	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	$\sqcup \sqcup$	_
P7	Design				
P7.1*	Disassembly, recycling Parts that have to be treated separately are easily separable		$\overline{}$		_
P7.2*	Plastic materials in covers/housing have no surface coating.				_
P7.3*	Plastic parts >100g consist of one material or of easily separable materials.		$\frac{\square}{\square}$	+	_
P7.4*	Plastic parts >25g have material codes according to ISO 11469 referring ISO 1043.	$\boxtimes$	+		_
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.		ឣ		_
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).		ឣ	+	_
F1.0			Ш		
P7.7*	Product lifetime  Upgrading can be done e.g. with processor, memory, cards or drives	$\boxtimes$	$\overline{}$		_
P7.8*	Upgrading can be done using commonly available tools	$\overline{\mathbb{X}}$	∺	+	_
P7.9.				井	
P7.10	Spare parts are available after end of production for: 5 years			+	_
1 7.10	Service is available after end of production for: 5 years  Material and substance requirements				
P7.11*	Product cover/housing material type:				-
	Material type: PC+ABS-FR(40) Material type: Material type:				
P7.12	Electrical cable insulation materials of power cables are PVC free.		$\boxtimes$		
P7.13	Electrical cable insulation materials of signal cables are PVC free		$\boxtimes$		
P7.14	All cover/housing plastic parts >25g are free from chlorine and bromine.	$\boxtimes$			
P7.15	All printed circuit boards (without components) >25g are halogen free. as defined in IEC61249-2-21. (See				
	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: , CAS #:				
	Alt. 2				
	Chemical specifications of flame retardants in printed circuit boards (without components) >25g according ISO 1043-4: <i>Brominated Epoxy Resin See P14</i>				
P7.18	Alt. 1 Flame retarded plastic parts >25g contain the following flame retardant substances/preparations in				
	concentrations above 0.1%:	ш	ш		
	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: FR(40)				
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 5.07%.				
P7.21	Of total plastic parts' weight >25g, biobased material content is 0%.				_
P7.22	Light sources are free from mercury	$\boxtimes$	Ш		
P8	If mercury is used specify: Number of lamps: and max. mercury content per lamp: mg  Batteries mg				
P8.1*	Battery chemical composition: Lithium Ion/Lithium Manganese Dioxide				-
P8 2	Ratteries meet the requirements of the following voluntary program/s: US PRPC			+	_

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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	environnientai a	ittributes - Market requ	allements (cont	inueu)		Requirement met	
Item	F	- 41				Yes No n.a	d.
-	P9 Energy consumption						
9.1 For the product the following power levels or energy consumptions are reported: See P14							
Energy mo	de *	Power level at 100 V AC	Power level at 115 V AC	Power level at 230 V AC	Reference / Standard for enemethod *	ergy modes and test	J
Peak (On-	max)	65 W	<b>65</b> W	<b>65</b> W	Full load		<u> </u>
Category	v I1						
	State - WOL Ena	bled 6.06876 W	5.73876 W	5.86488 W	Use for ENERGY STAR V6	registration (P <sub>idle</sub> )	1
Long Idle	State - WOL Enal	oled 3.78756 W	3.50748 W	3.94548 W	Use for ENERGY STAR V6		_
Sleep (S3)	- WOL Enabled	0.61746 W	0.620004 W	<i>0.66684</i> W	Use for ENERGY STAR V6	registration(P <sub>sleep</sub> )	1
Sleep (S3)	- WOL Disabled	0.61746 W	0.620004 W	0.66684 W	Reference		3
Off (S5) - I	WOL Enabled	0.196152 W	0.199392 W	<b>0.246312</b> W	Use for ENERGY STAR V6	registration(P <sub>off</sub> )	3
Off (S5) - I	WOL Disabled	0.32 W	0.32 W	<b>0.34</b> W	Use for EuP		]
Category	y D 1/2						
Short Idle	State - WOL Enal	bled W	W	W	Use for ENERGY STAR V6	registration (P <sub>idle</sub> )	]
Long Idle	State - WOL Enal	oled W	W	W	Use for ENERGY STAR V6	registration (P <sub>idle</sub> )	
Sleep (S3)	- WOL Enabled	W	W	W	Use for ENERGY STAR V6	registration (P <sub>sleep</sub> )	]
	- WOL Disabled	W	W	W	Reference		]
	NOL Enabled	W	W	W	Use for ENERGY STAR V6	registration(P <sub>off</sub> )	]
	WOL Disabled	W	W	W	Use for EuP		]
plugged in	ad ower supply / char the wall outlet but ed from the produc		0.063 W	0.132 W			]
PTEC * Typical End	ergy Consumption	W	W	W			J
TEC * Typical End	ergy Consumption	kWh/week	kWh/week	kWh/week			]
ETEC * Annual Ene	ergy Consumption	<b>21.59</b> kWh/year	20.49 kWh/year	<b>21.45</b> kWh/year	$E_{TEC} = (8760/1000) \times (P_{off} \times P_{short idle} \times 0.3 + P_{long idle})$		]
		P <sub>off</sub> : Off Mode(S5) -	WOL Enabled; P <sub>sleet</sub>	: Sleep Mode(S3)	- WOL Enabled; Pidle: Idle State	- WOL Enabled	_
Display res	olution* : 1920*1	080 Megapixels					]
Print Speed	d * : I	mages per minute				$\boxtimes$	3
Default tim	e to enter energy	save mode: 25 minutes					J
P9.2*	Information about	the energy save function	is provided with the	e product.	<u> </u>		
P9.3*		ts the energy requirements version: <b>Version 6.0</b> Ti		oluntary program t category: B	s:		]
P10	Emissions						
D40.4		<ul> <li>Declared according to IS</li> </ul>	O 9296	Darland	Deslaced A	weighted	
P10.1	Mode	Mode description		Declared A-weighted	Declared A-v		
				sound power		•	
				level $L_{W\!Ad}$ (	B) Operator position 🔀	Bystander positions	
				WAU	Desktop X	(only if product is not	
	Idle	* HDD:Idle		* 2.9	18.0	operator attended)	٦
	Operation	* HDD: Operating		* 3.1	23.8		╡┃
	Other mode	operaning			20.0		_
	Measured accord		CMA-74	1	L		
					L <sub>pAm</sub> measurement distance		
P10.2	P10.2 The product meets the acoustic noise requirements of the following voluntary program/s:						

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Product	environr	nental attributes - Market requirements (continued)	R	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):				$\boxtimes$
		Dust Ozone Styrene Benzene TVOC				
P10.5		al emission requirements of the following voluntary program/s are met for :  Oust Ozone Styrene Benzene TVOC				
		nagnetic emissions				
P10.6	Compute	er display meets the requirement for low frequency electromagnetic fields of the following sets:	voluntary			
P11	Consun	nable materials for printing products				
P11.1*	A Safety	Data Sheet (SDS) is available for the ink/toner preparation, even if not legally required (s	ee P4.3).			$\boxtimes$
P11.2*	Paper c EN1228	ontaining post-consumer recycled fibers can be used, provided that it meets the requ 1.	irements of			
P11.3*	2-sided	(duplex) printing/copying is an integrated product function.				$\boxtimes$
P12	Ergono	mics for computing products				
P12.1*	The disp	lay meets the ergonomic requirements of ISO 9241-307 for visual display technologies.		$\boxtimes$		
P12.2*	The phy	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): Corrugated Carton weight (kg): 0.318 packaging material type(s): Polyethylene Cushions weight (kg): 0.53 packaging material type(s): Others weight (kg): 0.123				
P13.2*	Product	plastic packaging is free from PVC.		$\square$		
P13.3*		media for user and product documentation (tick box): ic X, Paper X, Other				
P13.4*		er user and product documentation, please specify contained percentage of post-consume	r recycled			
P14		nal information (See Note B4)				
	informat knowled provided informat		ovided based h information	l on sup n. The in	plier's format	
P9	See End	ergy Star Qualified Notebooks & Tablet Computers for the latest information: ww.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw	code-CC			
ĺ	map://w	ww.energystar.gov/muex.cnn?ruseacuon=mna_a_product.snow=roductGroup&pgw	_coue=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	Lenovo E40-80	Logo
Model Number	20381,80ER;20445,80HR	_
Issue Date	2015-01-16	lenovo.
Additional information		

(d)	year of manufacture:						
(-)	•	2014					
(e)	E TEC value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics cards (dGfx) are disabled and if the system is tested with switchable graphics mode						
	with UMA driving the display:						
	Category (according to ErP Lot 3): A Etec: 17.32						
(f)	E TEC value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics cards (dGfx) are enabled:						
	Category (according to ErP Lot 3): B Etec: 17.35						
(g)	idle state power demand (Watts);	5.78					
'b\	alons made nature demand (Matte):						
(h)	sleep mode power demand (Watts);	0.70					
(i)	sleep mode with WOL enabled power demand (Watts) (where enabled);						
(j)	off mode power demand (Watts);						
(k)	off mode with WOL enabled power demand (Watts) (where enabled);						
<i>(</i> 1)	**************************************						
(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):						
	Average 45W: 87.58%,87.60%,88.32%; 65W:89.04%,89.92%,89.18%;						
	*internal note: show values for all available external power supplies						
(o)	the minimum number of loading cycles that the batteries can withstand (applies only to notebook computers):	300 cycles					
(p-1)	the measurement methodology used to determine information mentioned in points (I) – internal PSU efficiency:						
	NA NA						
(p-2) the measurement methodology used to determine information mentioned in points (m) – external PSU efficiency:							
	Energy-star requirement						
(p-3)	the measurement methodology used to determine information mentioned in points (o) – loadingcycles batteries:						
	IEC 61960 measurement methodology						

(p-4)	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:						
				Energy-star requirement			
(q)	sequence of steps for achieving a stable condition with respect to power demand::						
				Based on user manual			
(r)							
				Based on user manual			
(s)	sequence of off mode:	events required to re	ach the	mode where the equipment automatically changes to sleep and/or			
				Based on user manual			
(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):						
(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 time before the display sleep mode is set to activate after user inactivity (in minutes):						
(w)	information on the energy-saving potential of power management functionality:						
				Based on user manual			
(x)	user informat	tion on how to enable	the po	wer management functionality:			
				Based on user manual			
(z)		v supply system, — ir		st voltage in V and frequency in Hz, — total harmonic distortion of on and documentation on the instrumentation, set-up and circuits			
		2	30V/50F	dz, Total Harmonic Distortion <2 %			
Addition	Notebook Batte	ery Information:					
Yes		No	n/a	This notebook computer is operated by battery/ies that cannot replaced by a non-professional user.	be accessed and		
(Battery replaceab	not user ole)	(Battery user replaceable)		The battery[ies] in this product cannot be easily	y replaced by		
	<u> </u>			users themselves			
Additiona	al information						
I							