

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 *	Lenovo Global Environmental Affairs Alvin L Carter 1009 Think Place Building 2 / 5J3 Morrisville, North Carolina 27560 alcarter@lenovo.com	lenovo.
Internet site *	http://www.lenovo.com/social_responsibility/us/en/environment	t.html
Additional information		

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 *	Personal Computer Traditional Desktop			
Commercial name *	Lenovo Erazer X510			
Model number *	90AC; 10140; 90AD; 10143			
Issue date *	2014-06-03			
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	\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 number *	Lenovo Erazer X510	MT: 90AC; 10140; 9	T: 90AC; 10140; 90AD; 10143	
Issue date *	2014-06-03	Logo	lenovo.	

Product	environmental attributes - Legal requirements	Require	men	t met
Item	V 1	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).			
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)			
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/ThinkGreen_products.html#environment			
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		
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		
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).			\boxtimes
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 an 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		
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.	al 🔀		

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

Model number *	Lenovo Erazer X510	X510 MT: 90AC; 10140; 90AD; 10143		
Issue date *	2014-06-03	Logo	lenovo.	

Product	environmental attributes - Market requirements - Environmental conscious design Re	quire	men	t 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).		Ш	╨
P7	Design			
P7.1*	Disassembly, recycling Parts that have to be treated separately are easily separable			
P7.2*	Plastic materials in covers/housing have no surface coating.	$\stackrel{\triangle}{\vdash}$		-
P7.3*	Plastic parts >100g consist of one material or of easily separable materials.		<u> </u>	-
P7.4*			井	-#-
	Plastic parts >25g have material codes according to ISO 11469 referring ISO 1043.		_Щ	- -
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.			_ <u>_</u>
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).			
D7 7*	Product lifetime			
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives		_Ц	- -
P7.8*	Upgrading can be done using commonly available tools	\boxtimes		_ <u>_</u> _
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			
	Material and substance requirements			
P7.11*	Product cover/housing material type:	_		
P7.12	Material type: Steel Material type: ABS Material type: PC,PC+AB Electrical cable insulation materials of power cables are PVC free.	<u>-</u>		
P7.13	Electrical cable insulation materials of power cables are PVC free	₩	_	-
P7.13		井		_#
	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. (See		\boxtimes	Ш
P7.16	Note B2) Flame retarded plastic parts >25g in covers / housings are marked according ISO 1043-4:		$\overline{}$	
7.10	Marking:		ш	Ш
P7.17	Alt. 1			
	Chemical specifications of flame retardants in printed circuit boards >25g (without components):			
	TBBPA (additive) , TBBPA (reactive) , Other; chemical name:, CAS #:			_
	Att 6			
	Alt. 2 Chemical specifications of flame retardants in printed circuit boards (without components) >25g according			
	ISO 1043-4: Brominated Epoxy Resin See P14			Ш
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.			
	Provide a list of all used flame retardants including MSDS for each flame retardant. The list must contain complete chemical name, CAS number and supplier.			
	1. Chemical name: , CAS #: , Supplier:			
	2. Chemical name: , CAS #: , Supplier:			
	3. Chemical name: , CAS #: , Supplier:		_	_
	Alt. 2	\boxtimes		
	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,			
F7.19	R40, R46, R48, R50, R51, R53, R60, R61 and any combination of these (See Note B3)		Ш	Ш
P7.20	Of total plastic parts' weight >25g, recycled material content is <i>0</i> %.			
P7.21	Of total plastic parts' weight >25g, biobased material content is 0 %.			
P7.22	Light sources are free from mercury	\Box		\boxtimes
P8	Batteries			
P8.1*	Battery chemical composition:			
P8.2	Batteries meet the requirements of the following voluntary program/s:			

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 *	Lenovo	Erazer X	<i>'</i> 510	MT: 9	90AC; 10140; 90AD; 10143	
Issue date *	2014-06-03				Logo lenovo.	
Product environm	nental attrib	utes - Market re	equirements (c	continued)	Requirement n Yes No	net n.a.
	consumption				163 140 1	ii.a.
		owing power levels w/ WOL Enabled.		ımptions are rep	oorted: See P14	
Energy mode *		Power level at 100 V AC	Power level at 115 V AC	Power level 230 V AC	at Reference / Standard for energy modes and test method *	
		W	W	W		\boxtimes
Category 0		1		•		
Short Idle State - W	OL Enabled	W	W	W	Use for ENERGY STAR V6 registration (P _{idle})	
Long Idle State - W	OL Enabled	W	W	W	Use for ENERGY STAR V6 registration (P _{idle})	
Sleep (S3) - WOL E	nabled	W	W	W	Use for ENERGY STAR V6 registration(P _{sleep})	
Sleep (S3) - WOL D	isabled	W	W	W	Reference	
Off (S5) - WOL Ena		W	W	W	Use for ENERGY STAR V6 registration(Poff)	
Off (S5) - WOL Disa	abled	W	W	W	Use for EuP	
Category I1						
Short Idle State - W		W	W	W	Use for Energy Star V6.0 registration(P _{ShortIdle})	
Long Idle State - W		W	W	W	Use for Energy Star V6.0 registration(P _{Longldle})	
Sleep (S3) - WOL E		W	W	W	Use for Energy Star V6.0 registration (Psleep)	
Sleep (S3) - WOL D		W	W	W	Reference	
Off (S5) - WOL Ena		W	W	W	Use for Energy Star V6.0 registration (Poff)	
Off (S5) - WOL Disa	abled	W	W	W	Use for EuP	Ш
Category I2				147		
Short Idle State - W		W	W	W	Use for Energy Star V6.0 registration(P _{ShortIdle})	Ш
Long Idle State - W		W	W	W	Use for Energy Star V6.0 registration(P _{Longldle})	
Sleep (S3) - WOL E		W	W	W	Use for Energy Star V6.0 registration (P _{sleep})	
Sleep (S3) - WOL D		W	W	W	Reference	
Off (S5) - WOL Ena		W	W	W	Use for Energy Star V6.0 registration (P _{off})	
Off (S5) - WOL Disa	ablea	W	W	W	Use for EuP	Ш
Category D1 Short Idle State - W	(O) Enabled	W	W	W	Has for Energy Stor VS 0 registration/D	
Long Idle State - W		W	W	W	Use for Energy Star V6.0 registration(P _{ShortIdle}) Use for Energy Star V6.0 registration(P _{LongIdle})	Ш
Sleep (S3) - WOL E		W	W	W	Use for Energy Star V6.0 registration (P _{sleep})	
Sleep (S3) - WOL D		W	W	W	Reference	\vdash
Off (S5) - WOL Enal		W	W	W	Use for Energy Star V6.0 registration (P _{off})	\vdash
Off (S5) - WOL Disa		W	W	W	Use for EuP	\vdash
EPS No-load		W	W	W		
(External power supplugged in the wall of disconnected from the	utlet but	v	···			
TEC Typical Energy Cons	sumption	kWh/week	kWh/week	kWh/week		
ETEC * Annual Energy Cons	sumption	kWh/year	kWh/year	kWh/year	$E_{TEC} = (8760/1000) \times (P_{off} \times 0.45 + P_{sleep} \times 0.05 + P_{shortIdle} \times 0.35 + P_{LongIdle} \times 0.15)$	
		P _{off} : Off Mode(S5)	- WOL Enabled; P.	sleep: Sleep Mode(S	63) - WOL Enabled; P _{idle} : Idle State - WOL Enabled	
Display resolution	: Megapixels					
Print Speed	: lı	mages per minute				\boxtimes
Default time to enter	energy save r	node: 30 minutes				
P9.2* Informati	ion about the e	energy save function	on is provided wit	h the product.		\boxtimes
		energy requireme		ng voluntary prog	ram/s:	
	ENERGY STAR® version: Product category:					

Model number *	Lenovo Erazer X510	MT: 9	0AC; 10140; 90AD; 10143
Issue date *	2013-5-8		Logo lenovo.
Item			Yes No n.a
P10 Emissio			
Noise emission	 Declared according to ISO 	9296	
Mode	Mode description	Declared A-weighted sound power	Declared A-weighted sound pressure level $L_{p{ m Am}}$ (dB)
		level L_{WAd} (B)	
			Desktop X positions
			or Desk side (only if product is not operator attended)
Idle	* HDD: Idle	*3.9	Acoustical Noise Emission Values (9)(5)(6)(6)
			Machine Description Model TWAd (bels) Lapar (dlb) Lapar (dlb
Operation	* HDD: Operating	*3.9	
Other mode			
Measured according Other (only	to: X ISO7779 ECMA-74 f not covered by ECMA-74 with L _{pAm} m	easurement distance	m)
P10.2 The prod	uct meets the acoustic noise requireme	ents of the following voluntary	y program/s:
·	nental attributes - Market require		Requirement met
Item			Yes No n.a.
Chemica	l emissions from printing products		
	ormed according to ECMA-328 (ISO/IE	C 28360) standard, othe	er specify:
P10.4 Typical e	mission rate (print phase) is (mg/h): Oust Ozone Styrene	,	/oc
	emission requirements of the following ust Ozone Styre		are met for :
	agnetic emissions		
program/		frequency electromagnetic	fields of the following voluntary
	able materials for printing products Data Sheet (SDS) is available for the ir	k/topor proparation, even if	not locally required (see P4.3)
P11.2* Paper co	entaining post-consumer recycled fiber		
EN12281 P11.3* 2-sided (duplex) printing/copying is an integrated 	d product function.	
`	nics for computing products	product randers	
	ay meets the ergonomic requirements	of ISO 9241-307 for visual d	isplay technologies.
	ical input device meets the requiremen		
P13 Packagii	ng and documentation		
Product p	packaging material type(s): EPE packaging material type(s): Carton packaging material type(s): BOX	weight (kg): 0.4 weight (kg): 2.06 weight (kg): 0.12	3
	plastic packaging is free from PVC.	weight (kg). 0.12	
P13.3* Specify n	nedia for user and product documentati	on (tick box):	
	oxdot igotimes, Paper $oxdot,$ Other $oxdot$ r user and product documentation, plea	use specify contained percen	stage of post-consumer recycled
	6 (Japan only 70%)	se speeny contained percen	nage of post consumer recycled
	al information (See Note B4)		
informati knowledg provided	on contained in this document. All inform le available at the time of completion, a here is approximate and provided for in	mation provided by supplier in Ind supplier shall have no ob	ranties whether express or implied, regarding the in this document is provided based on supplier's ligation to update such information. The information See a Lenovo Account Representative for more
P7.17 Product	on. does not contain free TBBPA in printed	l circuit boards(without com	ponents)>25a.
P9.1	2000 Not Contain NOC 1221 A III printed	on our bourdo(minour com	ponomo/220gi

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 Erazer X510	Logo	
Model Number	90AC; 10140; 90AD; 10143	_	
Issue Date	2014-06-03	lenovo.	
Additional information	Only 90AD; 10143 is Erp Lot3 Qualified, which is equipped with ES PSU.		

P7.1.1	Product environmental attrib	outes		
(d)	Year of manufacture:			Availible on product labe
(e)	E TEC value (kWh) and capal are disabled and if the system display:	N/A		
(f)	E TEC value (kWh) and capal are enabled: Cat. D 274.27	oility adjustments applied when a l	II discrete graphics cards (dGfx)	
(g)	idle state power demand (Wat	ts);		77.00
(h)	sleep mode power demand (V	/atts);		1.83
(i)	sleep mode with WOL enabled	d power demand (Watts) (where e	enabled);	1.83
(j)	off mode power demand (Wat	0.76		
(k)	off mode with WOL enabled p	0.76		
(I)	Internal power supply efficience 10% 81.05% 20% 85.57%):		
(m)	External power supply efficien	cy (if applicable):		N/A
		0% 100% Averag	ge ;	
(o)	or Level: The minimum number of loadi computers):	N/A		
(f)	the electricity supply system, - used for electrical testing: Test voltage in V and frequence Total harmonic distortion of th	— information and documentation by in Hz 230V/50Hz be electricity supply system ≤ 2%	quency in Hz, — total harmonic disto to on the instrumentation, set-up and o and circuits used for electrical testing	circuits
	Instrument	Range Used	Make and Model **	
	Type AC Power Source	Or *** 1~280VAC;1~550HZ;1000V A.	NF;EC1000S; SN:9152124	
	Digital Watch	Full range	CASIO; HS-70W; SN:208Q08R	

		Powe	r Meter	0~600V;0~20A	YOKOGAWA;WT210;SN:91M94456		
		Hygrothe	ermograph	15~35°C/15~90%	testo; 608-H1,SN:1034895602		
			nemometer	0~20m/s,-20~70°C	Testo;425;SN:02591883		
		Light M	easuring	1°;1-300cd/ m²	Konica Minolta;LS-110;		
(p-1)) The measurement methodology used to determine information mentioned in points (I) – internal PSU efficiency: 80 PLUS® Program						
(p-2) The measurement methodology used to determine information mentioned in points (m) – external PSU						PSU	
efficiency:							
	N/A						
(p-3)	The measurement methodology used to determine information mentioned in points (o) – loadingcycles batteries: N/A						
(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:						
IEC 62301							
(q)	Sequence of steps for achieving a stable condition with respect to power demand::						
Power on -> Wait 5 minutes -> Stable condition							
(r)	Description of how sleep and/or off mode was selected or programmed:						
Begin menu -> Power -> Select sleep or off mode							
(s)	Sequence of events required to reach the mode where the equipment automatically changes to sleep and/or off mode:						
Control Panel->Power Options-> Change Settings-> Restore default settings for this plan							
(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): 30 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): 45 minutes						
(v)	The	The length of time before the display sleep mode is set to activate after user inactivity (in minutes): 15 minutes					
(w)	Information on the energy-saving potential of power management functionality:						
N/A							
(x)	(x) User information on how to enable the power management functionality:						
Refer to User Guide							
Addition Notebook Battery Information:							
Yes	No	n/a	This notebook user.	computer is operated by batt	ery/ies that cannot be accessed and replace	ed by a non-professional	
			The battery	[ies] in this product ca	annot be easily replaced by users t	themselves	
Additional information							