

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 *	www.pc.ibm.com/ww/lenovo/about/environment	
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 *	otebook PC					
Commercial name *	enovo G450					
Model number *	W/T:20022, 2949					
Issue date *	009-Jun-01					
Intended market *	Global Europe Asia, Pacific & Japan Americas Other					
Additional information	ENERGY STAR® Qualified; EPEAT GOLD Rating; GREENGUARD Certified					

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(Quality Control	Requireme	ent met
I	ltem	Yes	No
7	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 cont such as organized by IT-Företagen (see www.itecodeclaration.org).	rol 🔀	

Model number *	Lenovo G450 M/T:20022, 2949		
Issue date *	2009-Jun-01	Logo	lenovo

Product	environmental attributes - Legal requirements F	equire	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 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.	\boxtimes		
P1.3*	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC),	\square		
	hydrobromofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachloride, 1,1,1-		ш	
	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	X	П	
	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),			\boxtimes
	Tris-(aziridinyl)-phosphineoxide (TEPA), polybrominated biphenyl (PBB) (see legal reference).			
P1.7*	Comment: Legal reference has no maximum concentration values. Textile and leather parts with direct skin contact do not contain more than 0.003% Azo colorants that split		_	
P1.7	aromatic amines. (See legal reference and Note B1)	Ш		\boxtimes
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).	ш	ш	
	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/cm²/week (see legal reference).			
P1.10*	Comment: Max limit in legal reference when tested according to EN1811:1998. REACH Article 33 information about substances in articles is available at (add URL or mail contact):	\square		
1 1.10	http://www.lenovo.com/social_responsibility/us/en/environment.html		Ш	
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		ш	ш
	marked with the chemical symbol for the metal concerned, Hg or Pb. Information on proper disposal is			
Do 04	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	\square		
1 2.0	design of the product). Exception: Batteries that are permanently installed for safety, performance, medical		ш	Ш
	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).	\boxtimes		
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).	\boxtimes		
P3.4*	The product is labeled to show conformance with applicable legal requirements (see legal reference).	\square		
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		П	
	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 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 Montreal Protocol (see legal reference).	\boxtimes		
	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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Produc	t environmental attributes - Market requirements - Environmental conscious design Re	equire	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).			Ш
P7	Design Disassembly, recycling			
P7.1*	Parts that have to be treated separately are easily separable	X		
P7.2*	Plastic materials in covers/housing have no surface coating.	T		\blacksquare
P7.3*	Plastic parts >100g consist of one material or of easily separable materials.	$\overline{\boxtimes}$	Ħ	Ħ
P7.4*	Plastic parts >25g have material codes according to ISO 11469 referring ISO 1043.	X	Ħ	Ħ
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.		Ħ	$\overline{}$
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).	X	∺	∺
	Product lifetime			
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives			
P7.8*	Upgrading can be done using commonly available tools		\dashv	∺
P7.9.				╫
P7.10	Spare parts are available after end of production for: 5 years			₩
F7.10	Service is available after end of production for: 5 years			Ш
P7.11*	Material and substance requirements Product cover/housing material type:			
F 7.11	Material type: <i>PC+ABS-FR</i> (40) Material type: Material type:			
P7.12	Electrical cable insulation materials of power cables are PVC free.	П		
P7.13	Electrical cable insulation materials of signal cables are PVC free	Ħ		\blacksquare
P7.14	All cover/housing plastic parts >25g are free from chlorine and bromine.			\dashv
P7.15	All printed circuit boards (without components) >25g are halogen free. as defined in IEC61249-2-21. (See	$\stackrel{\triangle}{\vdash}$		₩
7.13	Note B2)			Ш
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: , 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%:			
	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 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 0%.			
P7.21	Of total plastic parts' weight >25g, biobased material content is 0%.			
P7.22	Light sources are free from mercury	\boxtimes		
P8	Batteries			
P8.1*	Battery chemical composition: Lithium Ion/Lithium Manganese Dioxide			
P8.2	Batteries meet the requirements of the following voluntary program/s: US RBRC			

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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Product e	Product environmental attributes - Market requirements (continued) Requirement me					met
Item	tem Yes No n.a.					n.a.
P9 Energy consumption						
9.1		e following power leven pped w/ WOL Enable		nptions are reporte	ed: See P14	
		Reference / Standard for energy modes and test method *				
Peak (On-I	nax)	90 W	90 W	90 W	Full load	
Category	/ A	•				
Idle State -	WOL Enabled	10.1 W	10.1 W	10.8 W	Use for Energy Star V5 registration(P _{idle})	
Sleep (S3)	- WOL Enabled	0.85 W	<i>0.86</i> W	1.01 W	Use for Energy Star V5 registration(P _{sleep})	
Sleep (S3)	- WOL Disabled	W	W	W	Reference	
Off (S5) - V	VOL Enabled	0.43 W	0.47 W	0.58 W	Use for Energy Star V5 registration(P _{off})	
Off (S5) - V	VOL Disabled	W	W	W	Use for EuP	\boxtimes
Category	<u>/ B</u>					
	WOL Enabled	15.1 W	15.1 W	16.7 W	Use for Energy Star V5 registration(P _{idle})	\boxtimes
Sleep (S3)	- WOL Enabled	0.93 W	0.95 W	1.04 W	Use for Energy Star V5 registration(P _{sleep})	\boxtimes
	- WOL Disabled	W	W	W	Reference	\boxtimes
	VOL Enabled	0.50 W	0.52 W	<i>0.61</i> W	Use for Energy Star V5 registration(P _{off})	\boxtimes
• ′	VOL Disabled	W	W	W	Use for EuP	X
EPS No-loa		0.22 W	0.22 W	0.27 W		
	ower supply / gged in the wall					
outlet but d	isconnected from					
the product	.)	130/1/	130/1/	1300 /		<u> </u>
TEC Typical Ene	ergy Consumption	kWh/week	kWh/week	kWh/week		╽╙╵
.) p. oa	g, cocup					
ETEC *	ergy Consumption	29.5 kWh/week	29.7 kWh/week	32.2 kWh/week	$E_{TEC} = (8760/1000) \times (P_{off} \times 0.6 + P_{sleep} \times 0.1 + P_{idle} \times 0.3)$	
Annual Ene	rigy Consumption	43.3 kWh/week	43.9 kWh/week	48.1 kWh/week	U.1 + Fidle X U.3)	
		P _{off} : Off Mode(S5) - I	NOL Enabled; P _{sleep} :	Sleep Mode(S3) - WO	L Enabled; P _{idle} : Idle State - WOL Enabled	
Display res	olution : 1366x7	68 Megapixels	<u> </u>			
Print Speed	: :	Images per minut	e			
Default time	e to enter energy s	ave mode: minutes				Ħ
P9.2*	Information about	the energy save fund	tion is provided with	the product.		
P9.3*	The product meet	s the energy requiren	nents of the following	voluntary program		
		version: Version 5.0 nergy Star for Exteri				
P10	Emissions	lergy Star for Extern	iai i ower ouppnes	Engionity Oriteria	Version 2	\perp
1 10		- Declared according	to ISO 9296			
P10.1	Mode	Mode 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 (only if product is not	
					or Desk side operator attended)	
Idle *		* HDD: Idle		* 2.29	22.9	
	Operation	* HDD: Operating		* 4.5	45	╽╚
-	Other mode		75044 = :			
	Measured accord	ing to: ISO7779 L	ECMA-74	ad by ECMA 74 ···	h I maggurament distance	1
P10.2	The product meet	Other		•	h L _{pAm} measurement distance m)	\vdash
	The product meets the acoustic noise requirements of the following voluntary program/s:					

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Product 6	environmental attributes - Market requirements (continued)	equire	ment	met
Item	, , ,	Yes	No	n.a.
	Chemical emissions from printing products		İ	
P10.3*	Test performed according to ECMA-328 (ISO/IEC 28360) standard, other specify:			X
P10.4	Typical emission rate (print phase) is (mg/h):			$\overline{\mathbf{X}}$
	Dust Ozone Styrene Benzene TVOC			
P10.5	Chemical emission requirements of the following voluntary program/s are met for :			X
	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: <i>MPR-II</i>			
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.			\boxtimes
P11.3*	2-sided (duplex) printing/copying is an integrated product function.			\boxtimes
P12	Ergonomics for computing products			
P12.1*	The display meets the ergonomic requirements of ISO 9241-307 for visual display technologies. See P14	\boxtimes		
P12.2*	The physical input device meets the requirements of ISO 9995 and ISO 9241-410. See P14		$\overline{\Box}$	
P13	Packaging and documentation			
P13.1*	Product packaging material type(s): Corrugated cardboard weight (Kg): 0.36 Kg			
	Product packaging material type(s): Polystyrene weight (Kg): 0.00 Kg			
	Product packaging material type(s): Polyethylene weight (Kg): 0.4 Kg			
P13.2*	Product plastic packaging is free from PVC.	\boxtimes		
P13.3*	Specify media for user and product documentation (tick box):			
	Electronic , Paper , Other			
P13.4*	For paper user and product documentation, please specify contained percentage of post-consumer recycled			
	fiber: 0% (Japan only 70%)			
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 knowledge available at the time of completion, and supplier shall have no obligation to update such information			on
	provided here is approximate and provided for informational purposes only. See a Lenovo Account Representa			OH
	information.			
P7.17	Product does not contain free TBBPA in printed circuit boards(without components)>25g.			
P9	See Energy Star Qualified Notebooks & Tablet Computers for the latest information:			
	http://downloads.energystar.gov/bi/qplist/laptops_prod_list.xls			
P12.1	Product is designed to meet the subject ISO Standard 9241-307, but is not confirmed through formal test			
P12.2	Product is designed to meet the subject ISO Standard 9995 and 9241-410, but is not confirmed through	formal t	test	
	methods.			

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