

#### 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 ThinkPad	Logo	
Company name *	Lenovo		
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Internet site *	http://www.lenovo.com/social_responsibility/us/en/environment	t.html	
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 S5 Yoga 15				
Model number *	20DQ, 20DR				
Issue date *	December 1, 2014				
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	nt met
Item		Yes	No
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 contro such as organized by IT-Företagen (see www.itecodeclaration.org).		

Model number *	20DQ, 20DR		
Issue date *	December 1, 2014	Logo	lenovo.

Product	duct environmental attributes - Legal requirements			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.			
P1.3*	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC),	$\boxtimes$	$\Box$	
	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).	$\boxtimes$		
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).	$\boxtimes$		
P3.2*	The product complies with legally required standards for electromagnetic compatibility (see legal reference).		$\blacksquare$	$\overline{\Box}$
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).	$\boxtimes$	$\Box$	
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).		$\Box$	$\square$
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.			
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).  Comment: Legal reference has no maximum concentration values.			

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

Model number *	20DQ, 20DR		
Issue date *	December 1, 2014	Logo	lenovo.

Product	environmental attributes - Market requirements - Environmental conscious design R	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).	$\boxtimes$		
P7	Design Disassembly, recycling			
P7.1*	Parts that have to be treated separately are easily separable		П	
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.			∺
P7.4*	Plastic parts >25g have material codes according to ISO 11469 referring ISO 1043.	$\overline{\mathbb{X}}$	Ħ	干
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.		Ħ	干
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).	$\square$	Ħ	一片
	Product lifetime			
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives		П	
P7.8*	Upgrading can be done using commonly available tools		$\overline{\Box}$	币
P7.9.	Spare parts are available after end of production for: 5 years			一百
P7.10	Service is available after end of production for: 5 years			
	Material and substance requirements			
P7.11*	Product cover/housing material type:			
	Material type: Magnesium Material type: Alminum Material type: PC+ABS-I	FR(40)		
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	$\boxtimes$		
	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: DOPO(9,10-dihydro-9-oxa-10-phosphaphenanthrene-10-oxide), CAS #: 35948-25-5			
	Alt. 2 Chemical specifications of flame retardants in printed circuit boards (without components) >25g according ISO 1043-4: FR(40)			
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.			
	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)	$\bowtie$		П
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 10%.			
P7.21	Of total plastic parts' weight >25g, biobased material content is 0%.			
P7.22	Light sources are free from mercury  If mercury is used specify: Number of lamps:  and max. mercury content per lamp:  mg			
P8	Batteries and max. mercury content per lamp.			
P8.1*	Battery chemical composition: Lithium Ion/Lithium Manganese Dioxide			
P8 2	Ratheries meet the requirements of the following voluntary program/s: IIS Call/Recycle FRRA IRRC			一一

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	nvironmental at	tributes - Market	requirements (	continued)	Requirement	met
Item					Yes No	n.a.
	Energy consumpt					
9.1	For the product the	following power lev	els or energy cons	umptions are rep	ported: See P14	
Energy mod	de *	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	nax)	45W/65W W	45W/65W W	45W/65W W	Full load	
Category	<u>/ 11</u>					
Short Idle		<b>7.73652</b> W	<b>7.5522</b> W	7.76292 W	Use for Energy Star V6.1 registration(P <sub>SHORT_IDLE</sub> )	
Long Idle		4.11204 W	4.6014 W	4.2726 W	Use for Energy Star V6.1 registration(P <sub>LONG_IDLE</sub> )	
Sleep (S3)		0.759204 W	<b>0.748116</b> W	0.779436 W	Use for Energy Star V6.1 registration(P <sub>SLEEP)</sub>	
Off (S5)		0.201264 W	0.202572 W	0.253848 W	Use for Energy Star V6.1 registration(P <sub>OFF</sub> )	
EPS No-loa		W	<b>0.144</b> W	<b>0.252</b> W		
charger plug	ower supply / gged in the wall isconnected from .)					
PTEC * Typical Ene	ergy Consumption	W	W	W		
TEC * Typical Ene	ergy Consumption	kWh/week	kWh/week	kWh/week		
ETEC *		26.70	<b>26.62</b> kWh/year	27.09	$E_{TEC} = (8760/1000) \times (P_{OFF} \times T_{OFF} + P_{SLEEP} \times$	
Annual Ene	rgy Consumption	kWh/year		kWh/year	T <sub>SLEEP</sub> + P <sub>LONG_IDLE</sub> × T <sub>LONG_IDLE</sub> + P <sub>SHORT_IDLE</sub> × T <sub>SHORT_IDLE</sub> )	
Diamles, rese	alution* + 4020 × 4	000 Divolo				
	olution* : 1920 x 10	760 Pixeis				Ш
Print Speed	* :	Images per minute				$\boxtimes$
Default time	e to enter energy sa	ve mode: 20 minute	s			
P9.2*	Information about t	he energy save fund	ction is provided wi	th the product.		
P9.3*		the energy requiren				
	Others specify:	version: Version 6.1	r rier: F	Product category:		
P10	Emissions					
		Declared according	to ISO 9296	Danlarad	De alexa d A succeptual	
P10.1	Mode	Mode description		Declared A-weighted	Declared A-weighted	
				sound power	er $pAm$ (dB)	
				level $L_{W\!Ad}$ (	(B) Operator position Bystander positions	
				,,,,,	Desktop (only if product is not	
					or Desk side operator attended)	<u>                                      </u>
<u> </u>		Idle		* 2.9	21	l∐
	Operation *	Operating (HDD)		* 2.9	21	📙
	*	Operating (CPU)		* 3.1	22	
	Other mode	. 🔽				
	Measured according	g to: ISO7779 Other		vered by ECMA	74 with L <sub>pAm</sub> measurement distance m)	
P10.2	The product meets	the acoustic noise r	\ ,		<u> </u>	

Model nu	mber *	20DQ, 20DR					
Issue dat	e *	December 1, 2014		Logo	leno	VO.	
Product	environr	nental attributes - Market requirements (continu	ıed)		Require	men	t me
Item		·			Yes	No	n.a
	Chemic	al emissions from printing products					
P10.3*	Test per	formed according to ECMA-328 (ISO/IEC 28360) standard	d , other specify:				$\times$
P10.4		emission rate (print phase) is (mg/h):					X
	• •	Dust Ozone Styrene Ber	nzene TVOC				
P10.5	Chemica	al emission requirements of the following voluntary progra	m/s are met for	:			X
	[	Oust Ozone Styrene	Benzene	TVOC			
	Electron	nagnetic emissions					
P10.6		er display meets the requirement for low frequency electro	magnetic fields of the foll	owing voluntary	$\boxtimes$		
		/s: <b>MPR-II</b> (3 pin AC adapter only)					
P11		nable materials for printing products	15 (1 11				
P11.1*		Data Sheet (SDS) is available for the ink/toner preparation					$\boxtimes$
P11.2*	EN1228		•	ne requirements	of		
P11.3*	2-sided	(duplex) printing/copying is an integrated product function					X
P12		nics for computing products					
P12.1*	The disp	lay meets the ergonomic requirements of ISO 9241-307 f	or visual display technolo	gies.	$\boxtimes$		
P12.2*	The phys	sical input device meets the requirements of ISO 9995 an	d ISO 9241-410.		$\boxtimes$		
P13	Packagi	ng and documentation					
P13.1*	Product Product	packaging material type(s): Corrugated Cardboard packaging material type(s): 100% Recycled Molded Pull packaging material type(s): Others (plastic bags)	weight (kg weight (k weight (kg	g): <b>0.260</b>			
P13.2*	Product	plastic packaging is free from PVC.					
P13.3*		media for user and product documentation (tick box):					
P13.4*		er user and product documentation, please specify contain	ned percentage of post-co	onsumer recycled	t		
P14	Addition	nal information (See Note B4)					
	NOTE: S informati knowled	Supplier makes no representations, guarantees, assurance on contained in this document. All information provided by ge available at the time of completion, and supplier shall here is approximate and provided for informational purporational purporations.	y supplier in this documer have no obligation to upda	nt is provided bas ate such informa	sed on supption. The in	olier's forma	
P9	See Ene	ergy Star Qualified Notebooks & Tablet Computers for ww.energystar.gov/index.cfm?fuseaction=find_a_prod	the latest information:				

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 S5 Yoga 15	Logo
Model Number	20DQ, 20DR	lenovo
Issue Date	December 1, 2014	1011010.
Additional information		

(d)	year of man	ufacture:				2014				
(e)	E TEC value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics card disabled and if the system is tested with switchable graphics mode with UMA driving the display:  Category (according to ErP Lot 3): A Etec: 14.20									
(f)	E TEC value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics cards (dGfx) are enabled:									
	Category (a	according to E	rP Lot 3): <i>B</i>	Etec: 14.	85					
(g)	idle state power demand (Watts);									
(h)	sleep mode power demand (Watts);									
(i)	sleep mode with WOL enabled power demand (Watts) (where enabled);									
(j)	off mode po	wer demand (W	/atts);			0.48				
(k)	off mode with WOL enabled power demand (Watts) (where enabled);									
(l)	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):									
	10%	20%	50%	100%	Average ;					
	or level: V									
(0)	the minimum number of loading cycles that the batteries can withstand (applies only to notebook computers):									
(p-1)	the measur	rement method	ology used to	determine infor	mation mentioned in points (I) -	internal PSU				
	efficiency:  Not applicable									
(p-2)	the measurement methodology used to determine information mentioned in points (m) – external PSU									
(P-Z)	efficiency:									
	EPA "Test Method for Calculating the Energy Efficiency of Single-Voltage External AC-DC and AC-AC Power Supplies" dated August 11, 2004									
(p-3)	the measurement methodology used to determine information mentioned in points (o) – loadingcycles batteries:									
	IEC 61960 measurement methodology									
(p-4)	4h a	mont mothodol	logy used to det	armina informatio	n mentioned in maximum, idle, slee	an off made				

power as defined in Point P9.1 in the Product IT Eco Declaration:											
IEC 62623 measurement methodology											
(q)	sequence of steps for achieving a stable condition with respect to power demand::										
	IEC 62623 measurement methodology										
(r)	description of how sleep and/or off mode was selected or programmed:										
By selecting sleep and/or off mode thru Windows operating system											
(s)	sequence of events required to reach the mode where the equipment automatically changes to sleep and/or off mode:										
Automatically changes to sleep after 20 minutes											
(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): 20 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):  10 minutes										
(w)	information on the energy-saving potential of power management functionality:										
User information described in User Guide and Power Manager under ThinkVantage menu in all programs											
(x)	user information on how to enable the power management functionality:										
User information described in User Guide and Power Manager under ThinkVantage menu in all programs											
(z) test parameters for measurements: — test voltage in V and frequency in Hz, — total harmonic distortion of the electricity supply system, — information and documentation on the instrumentation, set-up and circuits used for electrical testing:											
230V, 50Hz, Total Harmonic Distortion <2 %											
Addition I	Notebook B	attery Information:	1								
Yes		No	n/a	This notebook computer is operated by battery/ies that cannot be access by a non-professional user.	sed and replaced						
(Battery replaceabl	not user e)	(Battery user replaceable)		The battery[ies] in this product cannot be easily replace themselves	ced by users						