

#### 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 / 5F1 Morrisville, North Carolina 27560 alcarter@lenovo.com	lenovo			
Internet site *	http://www.lenovo.com/social_responsibility/us/en/environment.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 *	All-in-One Desktop PC						
Commercial name *	Lenovo C470						
Model number *	10170/F0AR						
Issue date *	14/05/2014						
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	$\boxtimes$	
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).	bl 🔀	

Model n	umber *	Lenovo C470 MT:10170; F0AR 10170/F0AR				
Issue da	ite *	14/05/2014 Logo		lend	<b>DVO</b>	
Product	t onviron	mental attributes - Legal requirements	B	equire	mont	mot
Item		mentar attributes - Legar requirements		Yes	No	n.a.
P1	Hazardo	ous substances and preparations				
P1.1*	Products 0.1% po	s do not contain more than; 0.1% lead, 0.01% cadmium, 0.1% mercury, 0.1% hexavalent chr lybrominated biphenyls (PBB) or 0.1% polybrominated diphenyl ethers (PBDE). (See legal e and Note B1)	omium,			
P1.2*	Products Comme		$\boxtimes$			
P1.3*	hydrobro trichloro	s do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), pmofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachloride, 1, ethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum ration values.	1,1-			
P1.4*	Products	do not contain more than; 0.005% polychlorinated biphenyl (PCB), 0.005% polychlorinated (I (PCT) in preparations (see legal reference).		$\square$		
P1.5*	Products	s do not contain more than 0.1% short chain chloroparaffins (SCCP) with 10-13 carbon atom ntaining at least 48% per mass of chlorine in the SCCP (see legal reference).	s in the	$\boxtimes$		
P1.6*	Textile a Tris-(azi	nd leather parts with direct skin contact do not contain Tri-(2,3,-dibromopropyl)-phosphate ( ridinyl)-phosphineoxide (TEPA), polybrominated biphenyl (PBB) (see legal reference). nt: Legal reference has no maximum concentration values.	TRIS),			
P1.7*		nd leather parts with direct skin contact do not contain more than 0.003% Azo colorants that amines. (See legal reference and Note B1)	split			$\square$
P1.8*	pentach	parts do not contain arsenic and chromium as a wood preservation treatment as well as orophenol and derivatives (see legal reference). ht: Legal reference has no maximum concentration values.				
P1.9*	Parts wit microgra	th direct and prolonged skin contact do not release nickel in concentrations above 0.5 m/cm²/week (see legal reference). nt: Max limit in legal reference when tested according to EN1811:1998.		$\square$		
P1.10*	REACH	Article 33 information about substances in articles is available at (add URL or mail contact): ww.lenovo.com/social_responsibility/us/en/materials.html		$\boxtimes$		
P2	Batterie	S				
P2.1*	more tha marked	oduct contains a battery or an accumulator, it is labeled with the disposal symbol and if it cor an 0.0005% of mercury (for button cells only) by weight, or more than 0.004% of lead, it shal with the chemical symbol for the metal concerned, Hg or Pb. Information on proper disposal I in user manual. (See legal reference)	be			
P2.2*	accumul	ells used in the product do not contain more than 2% by weight of mercury. Other batteries or ators do not contain more than 0.0005% of mercury or 0.002% of cadmium. (See legal refer	ence)		$\square$	
P2.3*	design o or data i	and accumulators are easily removable by either users or service providers (as dependent f the product). Exception: Batteries that are permanently installed for safety, performance, r integrity reasons do not have to be "easily removable". (See legal reference)				
P3		EMC connection to the telephone network and labeling				
P3.1*		duct complies with legally required safety standards as specified (see legal reference).				
P3.2* P3.3*	If produc	duct complies with legally required standards for electromagnetic compatibility (see legal refe st is intended for connection to a public telecom network or contains a radio transmitter, it co	,			
P3.4*		ally required standards for radio and telecommunication devices (see legal reference). duct is labeled to show conformance with applicable legal requirements (see legal reference)	).			
P4	Consum	nable materials				
P4.1*	legal ref	o conductor (drum, belt etc.) is used in the product, it does not contain cadmium max 0.01% erence and Note B1).	`			$\boxtimes$
P4.2*	If ink/ton	er is used in the product, it does not contain cadmium max 0.1% by weight (see legal refere	nce).			$\boxtimes$
P4.3*	product/ requirem	/toner formulation/preparation is classified as hazardous according to applicable regulations packaging is adequately labeled and a Safety Data Sheet (SDS) in accordance with these ients is available (see legal reference).	, the			
P5		packaging				
P5.1*	hexavale	ng and packaging components do not contain more than 0.01% lead, mercury, cadmi ant chromium by weight of these together.				
P5.2*		ackaging material is marked according to ISO 11469 referring ISO 1043 (see legal reference				
P5.3*	Protocol	duct packaging material is free from ozone depleting substances as specified in the N (see legal reference). nt: Legal reference has no maximum concentration values.	lontreal			

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

Model n	umber *	Lenovo C470 MT:10170; F0AR 10170/F0AR			
		10170/F0AR			
Issue da	ite "	14/05/2014 Logo	lend	<b>DVO</b> .	
Produc	t environ	mental attributes - Market requirements - Environmental conscious design	Require	ment	me
Item		atory to fill in. Additional information regarding each item may be found under P14.	Yes	No	n.a
P6		nt information			
P6.1*		on for recyclers/treatment facilities is available (see legal reference).	$\square$		
P7	Design	mbly, recycling			
P7.1*		t have to be treated separately are easily separable			
P7.2*		naterials in covers/housing have no surface coating.			╞
P7.3*		arts >100g consist of one material or of easily separable materials.			╞
P7.4*		arts >25g have material codes according to ISO 11469 referring ISO 1043.		╞	╞
P7.5		arts are free from metal inlays or have inlays that can be removed with commonly available tools.		-	
P7.6*		re easily separable. (This requirement does not apply to safety/regulatory labels).		⊢⊢	╞
F7.0	Product				
P7.7*		ing can be done e.g. with processor, memory, cards or drives			
P7.8*		ig can be done using commonly available tools		╞	╞
P7.9.					╞
P7.10		arts are available after end of production for: 5 years			╞
F7.10		s available after end of production for: 5 years and substance requirements			
P7.11*		cover/housing material type:			
		type: ABS Material type: Material type:			
P7.12	Electrica	cable insulation materials of power cables are PVC free.		$\square$	
P7.13	Electrica	I cable insulation materials of signal cables are PVC free			
P7.14	All cover	/housing plastic parts >25g are free from chlorine and bromine.		Ē	
P7.15	All printe Note B2	ed circuit boards (without components) >25g are halogen free. as defined in IEC61249-2-21. (Se	e		
P7.16	Marking:	tarded plastic parts >25g in covers / housings are marked according ISO 1043-4:			
P7.17		Il specifications of flame retardants in printed circuit boards >25g (without components): additive) , TBBPA (reactive) , Other; chemical name: , CAS #:			
	ISO 104	Il specifications of flame retardants in printed circuit boards (without components) >25g according 3-4: <b>Brominated Epoxy Resin See P14</b>			
P7.18	concentr	etarded plastic parts >25g contain the following flame retardant substances/preparations i ations above 0.1%:	in 🗌		
	1. Chem 2. Chem 3. Chem Alt. 2	ent: No legal limits exist, this is a market requirement. ical name: , CAS #: ical name: , CAS #: ical name: , CAS #: il specifications of flame retardants in plastic parts >25g according ISO 1043-4:			
P7.19	Plastic p	arts >25g are free from flame retardant substances/ preparations above 0.1% classified as R45,			
	R40, R4	6, R48, R50, R51, R53, R60, R61 and any combination of these (See Note B3)			
P7.20		plastic parts' weight >25g, recycled material content is 0%.			
P7.21		plastic parts' weight >25g, biobased material content is 0%.			
P7.22	If mercu	rces are free from mercury y is used specify: Number of lamps: and max. mercury content per lamp: mg			L
<b>P8</b> P8.1*	Battery of	s hemical composition:			
0.1	Dattery	and the composition.			

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 C470 MT:10170; F0AR 10170/F0AR Issue date\* 14/05/2014 Logo Ienovo

Product environmental attributes - Market requirements (continued) Requirement met						
Item				Yes No	n.a.	
P9         Energy consumption           9.1         For the product the following power levels or energy consumptions are reported: See P14						
Energy mode *	Power level at 100 V AC			-		
Peak (On-max)	51.619 W	51.541 W	52.141 W	Full load		
Category 0						
Short Idle State - WOL Enabled	d 36.134 W	36.133 W	37.24 W	Use for ENERGY STAR V6 registration (Pidle)		
Long Idle State - WOL Enabled	1 19.798 W	19.717 W	19.803 W	Use for ENERGY STAR V6 registration (P <sub>idle</sub> )	H	
Sleep (S3) - WOL Enabled	1.915 W	1.9134 W	1.9656 W	Use for ENERGY STAR V6 registration(P <sub>sleep</sub> )	Η	
Sleep (S3) - WOL Disabled	1.9147 W	1.9122 W	1.9588 W	Reference	H	
Off (S5) - WOL Enabled	0.9615 W	0.963 W	1.0043 W	Use for ENERGY STAR V6 registration(Port)	$\exists$	
Off (S5) - WOL Disabled	0.8940 W	0.8865 W	0.9381 W	Use for EuP	븜	
	0.0040	0.0000 11	0.0007 11			
Category 11 Short Idle State - WOL Enabled	W	W	W	Use for ENERGY STAR V6 registration(Pidle)		
Long Idle State - WOL Enabled		W	W	Use for ENERGY STAR V6 registration(P <sub>idle</sub> )	$\frac{\Box}{\Box}$	
Sleep (S3) - WOL Enabled	W	W	W	Use for ENERGY STAR V6 registration(P <sub>idle</sub> )	<u> </u>	
,				• • • • • •	<u> </u>	
Sleep (S3) - WOL Disabled	W	W	W	Reference	<u> </u>	
Off (S5) - WOL Enabled	W	W	W	Use for ENERGY STAR V6 registration(Port)		
Category 12					_	
Short Idle State - WOL Enabled		W	W	Use for ENERGY STAR V6 registration(P <sub>idle</sub> )		
Long Idle State - WOL Enabled		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> )		
Sleep (S3) - WOL Disabled	W	W	W	Reference		
Off (S5) - WOL Enabled	W	W	W	Use for ENERGY STAR V6 registration(Pott)		
Off (S5) - WOL Disabled	W	W	W	Use for EuP		
EPS No-load	<b>0.1499</b> W	0.153 W	0.1914 W			
PTEC * Typical Energy Consumption	<b>N/A</b> W	<b>N/A</b> W	<b>N/A</b> W		$\boxtimes$	
TEC *	Cat0: 74.84	Cat0: 74.57	Cat0: 75.09		$\square$	
Typical Energy Consumption ETEC *	kWh/week Cat0: 74.84	kWh/week Cat0: 74.57	kWh/week Cat0: 75.09	$E_{TEC} = (8760/1000) \times (P_{off} \times 0.45 + P_{sleep} \times 0.05)$	_	
Annual Energy Consumption	kWh/year	kWh/year	kWh/year	$+ P_{Shortidle} \times 0.35 + P_{Longidle} \times 0.15)$	Ш	
	Poff: Off Mode(S	5) - WOL Enabled;	P <sub>sleep</sub> : Sleep Mode	(S3) - WOL Enabled; P <sub>idle</sub> : Idle State - WOL Enabled		
Display resolution* : 1920*10	80 Megapixels					
Print Speed * : N/A	Images per minute				$\boxtimes$	
Default time to enter energy save	e mode: 25 min	utes				
P9.2* Information about the	e energy save funct	ion is provided wi	th the product.			
P9.3* The product meets th				gram/s:		
ENERGY STAR® ve Others specify:	ersion: Version 6.0	Her: Pro	oduct category:		H	
P10 Emissions						
Noise emission – D		to ISO 9296				
P10.1 Mode Mo	ode description		Declared A-weighted	Declared A-weighted		
			sound powe	$E_{pAm}$ (db)		
			level $L_{WAd}$ (			
				Desktop (only if product is not		
Idle Id	lle		* 3.7Bel(A)	30dB(A)		
	PU stress loading	80%	*4.4Bel(A)	300B(A) 35dB(A)	H	
Other mode						
Measured according	to: ISO7779	ECMA-74	•			
	Other			with L <sub>pAm</sub> measurement distance m)		
P10.2 The product meets the	ne acoustic noise re	equirements of the	e following volunt	ary program/s:	$\boxtimes$	

Model nur	nber *	Lenovo C470	MT:10	)170; F0AR	10170/F0	AR	10170/F	<b>OAF</b>	?
Issue date	*	14/05/2014				Logo	leno	VO	
	environn	nental attributes - Marke	et requirem	nents (continued)			Require		
Item							Yes	No	n.a.
D/a at		al emissions from printing							
P10.3*		formed according to ECMA-3		; 28360) standard 🛄,	other specify:				$\boxtimes$
P10.4	Typical e	emission rate (print phase) is							$\boxtimes$
		Dust Ozone	Styrene	Benzene	TVOC				
P10.5		al emission requirements of t	-		are met for :	_			$\square$
		Dust Ozone	Styren	e Benz	ene	TVOC			
		nagnetic emissions							
P10.6	Compute program/	er display meets the requiren /s:	nent for low f	requency electromagr	netic fields of the fol	lowing volunt	tary		$\square$
P11		hable materials for printing							
P11.1*	A Safety	Data Sheet (SDS) is availab	ole for the ink	/toner preparation, ev	en if not legally req	uired (see P4	.3).		$\mathbb{N}$
P11.2*	Paper co EN1228	ontaining post-consumer re	cycled fibers	can be used, provid	led that it meets t	he requireme	ents of		$\square$
P11.3*	2-sided (	(duplex) printing/copying is a	in integrated	product function.					Χ
P12	Ergonor	nics for computing produc	cts						
P12.1*	The disp	lay meets the ergonomic rec	quirements of	ISO 9241-307 for vis	ual display technolo	gies.	$\square$		
P12.2*	The phys	sical input device meets the	requirements	of ISO 9995 and ISC	9241-410.		$\boxtimes$		
P13	Packagi	ng and documentation							
P13.1*	Product Product	packaging material type(s):   packaging material type(s):   packaging material type(s):	PE HDPE	weight (kg): 1.07 weight (kg): 0.32 weight (kg): 0.005					
P13.2*	Product	plastic packaging is free from	n PVC.				$\square$		
P13.3*	Specify r Electroni	media for user and product d	locumentation	n (tick box):					
P13.4*		er user and product documer	ntation, pleas	e specify contained po	ercentage of post-co	onsumer recy	/cled		
P14	Addition	nal information (See Note E	34)						
	informati knowledg provided informati		ent. All inform ompletion, an ovided for info	ation provided by sup d supplier shall have r ormational purposes o	olier in this docume to obligation to upd only. See a Lenovo	nt is provided ate such info	based on sup rmation. The ir	plier's format	ion
P9		ergy Star Qualified Noteboo ww.energystar.gov/index.c				p&pgw_cod	e=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) $% \left( \frac{1}{2}\right) =0$	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	C470	Logo
Model Number	10170/F0AR	_
Issue Date	14/05/2014	lenovo
Additional information	N/A	

F / . I . I	Product environmental attributes	
(d)		of manufacturing- see product name plate
(e)	E TEC value (kWh) 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: Cat. B 131	·
(f)	E TEC value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics ca enabled: Cat. B 177	rds (dGfx) are
(g)	idle state power demand (Watts);	19.80
(h)	sleep mode power demand (Watts);	1.96
(i)	sleep mode with WOL enabled power demand (Watts) (where enabled);	1.97
(j)	off mode power demand (Watts);	0.94
(k)	off mode with WOL enabled power demand (Watts) (where enabled);	1.004
(I)	internal power supply efficiency at 10 %, 20 %, 50 % and 100 % of rated output power (if applicable): 10% 92.26% 20% 90.74% 50% 88.77% 100% 89.40% Average 90.29%	
(m)	external power supply efficiency (if applicable): 10% N/A 20% N/A 50% N/A 100% N/A Average N/A ; or Level: N/A	
(0)	the minimum number of loading cycles that the batteries can withstand (applies only to notebook computers):	N/A
(f)	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: Test Voltage: 230V-50HZ Test Equipment: Digital Power Meter: Chroma 66202 Measurement Test fixture : Chroma A662003 AC Source: Gwinstek ASP-9102	
(p-1)	the measurement methodology used to determine information mentioned in points (I) – internal PSU efficiency: Test Equipment: AC Source CHROMA: 6430/64300000908	

	Electronic Load CHROMA: 63030/6300006368 Power Meter CHROMA: 66202/662022003033	
	Test Setup:	
	☐ Connect the EUT to suitably calibrated AC source, power meter and electronic load.	
	Warm up at least 30 minutes at 100% of nameplate current output.	
	☐ The EUT shall be tested at 100%, 75%, 50%, 25% of nameplate output current and no load condition.	
	☐ Measure the relative parameters required from test record.	
	☐ The input test voltage shall be used 230V/50HZ.	
	☐ Ambient temperature: 23 +/-5℃.	
	<ul> <li>No-Load mode: Not connection to a product or any other load.</li> </ul>	
	<ul> <li>Test procedure following Test Method for Calculating the Energy Efficiency of single-voltage External AC-DC and AC-AC Power Supplies and "IEC 62301"</li> </ul>	
(p-2)	the measurement methodology used to determine information mentioned in points (m) - external PSU	
	efficiency:	
(n 2)	N/A the measurement methodology used to determine information mentioned in points (o) – loadingcycles	
(p-3)	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: <i>Test Condition:</i>	
	long idle Mode: Measure Panel brightness 150cd/m2	
	short idle Mode: Turn off the display: after 10minutes Max : Open Burn In Mode( Driver: Burn In Pro 7.1 Build 1017)	
	Max : Open Burn In Mode( Driver: Burn In Pro 7.1 Build 1017) Sleep(S3) : PC Setting go to Sleep	
	Off(S5): PC Setting to Shut down	
(q)	sequence of steps for achieving a stable condition with respect to power demand::	
r)	description of how sleep and/or off mode was selected or programmed:	
	Sleep Mode	
	Step 1. Select Shut down or sign out	
	Step2. Select Sleep	
	Off Mode Step1. Select Shut down or sign out	
	Step2. Select Shut down	
(s)	sequence of events required to reach the mode where the equipment automatically changes to sleep and/or	
(-)	off mode:	
	Sleep Mode	
	Step 1. Select control panel Step2. Select Power Options	
	Step3. Select Choose when to turn off the display	
	Step4. Setting Turn off the display	
	Off Mode	
	Step1. Select Shut down or sign out Step2. Select Shut down	
(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):	25 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):	25 minutes
	power mode that has a lower power demand requirement than sleep mode (in minutes).	25 minutes
(v)	the length of time before the display sleep mode is set to activate after user inactivity (in minutes):	10 minutes
		is minutes
(w)	information on the energy-saving potential of power management functionality:	
	Press F1 Button to BIOS Setting:	
(x)	Step1. Select Enhanced Power Saving Mode(ErP) user information on how to enable the power management functionality:	
~)	Press F1 Button to BIOS Setting:	
	Step1. Select Automatic Power on	
(_)	Step2. Select Wake on LAN	
	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	
(z)		
(Z)	for electrical testing:	
(Z)	for electrical testing: Test Voltage: 230V-50HZ	
(Z)	Test Voltage: 230V-50HZ Test Equipment:	
(Z)	Test Voltage: 230V-50HZ	

Yes	No	n/a	This notebook computer is operated by battery/ies that cannot be accessed and replaced by a non-professional user.
			The battery[ies] in this product cannot be easily replaced by users themselves

Additional information	
N/A	