# 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* | **Logo** |
| **Company name *** | *Lenovo* | |
| **Contact information *** | *Lenovo Global Environmental Affairs*<br>*Alvin L Carter*<br>*1009 Think Place*<br>*Building 2 / 5F1*<br>*Morrisville, North Carolina 27560*<br>*alcarter@lenovo.com* | |
| **Internet site *** | *http://www.lenovo.com/social_responsibility/us/en/environment.html* | |
| **Additional information** | *The latest version of this document can be found at*<br>*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 Edge E435*** |
| **Model number *** | ***M/T: 3256*** |
| **Issue date *** | |
| **Intended market *** | ☒ **Global** ☒ **Europe** ☒ **Asia, Pacific & Japan** ☒ **Americas** ☐ **Other** |
| **Additional information** | ENERGY STAR® Qualified; EPEAT Gold Rating, GREENGUARD Certification |

**This is an uncontrolled copy when in printed form. Please refer to the contact information for the latest version.**

| **Quality Control** | | **Requirement 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 control such as organized by IT-Företagen (see www.itecodeclaration.org). | ☒ | ☐ |

| Model number * | ThinkPad Edge E435 M/T:3256 | | |
|---|---|---|---|
| Issue date * | 2012, May 16 | Logo | lenovo |

| Product environmental attributes - Legal requirements | | Requirement 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), 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/cm$^2$/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/environment.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) | ☒ | ☐ | ☐ |
| 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). | ☒ | ☐ | ☐ |
| 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). | ☒ | ☐ | ☐ |
| **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). | ☐ | ☐ | ☒ |
| 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). | ☒ | ☐ | ☐ |
| 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 * | ThinkPad Edge E435 M/T:3256 | | |
|---|---|---|---|
| Issue date * | 2012, May 16 | Logo | lenovo |

| Product environmental attributes - Market requirements - Environmental conscious design | | Requirement 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). | ☒ | ☐ | ☐ |
| **P7** | **Design** | | | |
| | **Disassembly, recycling** | | | |
| P7.1* | Parts that have to be treated separately are easily separable | ☒ | ☐ | ☐ |
| 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. | ☒ | ☐ | ☐ |
| P7.5 | Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools. | ☒ | ☐ | ☐ |
| P7.6* | Labels are easily separable. (This requirement does not apply to safety/regulatory labels). | ☒ | ☐ | ☐ |
| | **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 | ☒ | ☐ | ☐ |
| 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:<br>Material type: ***PC+ABS-FR(40)*** Material type: ***PC-FR(40)*** Material type: | | | |
| P7.12 | Electrical cable insulation materials of power cables are PVC free. | ☐ | ☒ | ☐ |
| P7.13 | Electrical cable insulation materials of signal cables are PVC free | ☐ | ☒ | ☐ |
| P7.14 | 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 Note B2) | ☒ | ☐ | ☐ |
| P7.16 | Flame retarded plastic parts >25g in covers / housings are marked according ISO 1043-4:<br>Marking: ***FR(40)*** | ☒ | ☐ | ☐ |
| P7.17 | Alt. 1<br>Chemical specifications of flame retardants in printed circuit boards >25g (without components):<br>TBBPA (additive) ☐, TBBPA (reactive) ☐, Other; chemical name: ***9,10-dihydro-9-oxa-10-phosphaphenanthrene-10-oxide*** , CAS #: ***35948-25-5*** | ☒ | ☐ | ☐ |
| | Alt. 2<br>Chemical specifications of flame retardants in printed circuit boards (without components) >25g according ISO 1043-4: ***FR(40)*** | ☒ | ☐ | ☐ |
| P7.18 | Alt. 1<br>Flame retarded plastic parts >25g contain the following flame retardant substances/preparations in concentrations above 0.1%:<br>Comment: No legal limits exist, this is a market requirement.<br>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.<br>1. Chemical name: ***TMB1615*** , CAS #: ***confidential*** , Supplier: ***Mitsubishi***<br>2. Chemical name: ***FR3002*** , CAS #: ***confidential*** , Supplier: ***BAYER***<br>3. Chemical name: ***GC1150*** , CAS #: ***confidential*** , Supplier: ***Sabic*** | ☒ | ☐ | ☐ |
| | Alt. 2<br>Chemical specifications of flame retardants in plastic parts >25g according ISO 1043-4:<br>***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 ***10.56*** **%**. | | | |
| P7.21 | Of total plastic parts' weight >25g, biobased material content is ***0*** **%**. | | | |
| P7.22 | Light sources are free from mercury | ☒ | ☐ | ☐ |
| **P8** | **Batteries** | | | |
| P8.1* | Battery chemical composition: ***Li-ion*** | | | ☐ |
| 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.*

| Model number * | ThinkPad Edge E435 M/T:3256 | | |
|---|---|---|---|
| Issue date * | 2012, May 16 | Logo | lenovo |

| 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:<br>The product is shipped w/ WOL Enabled. | | | | ☒ ☐ ☐ |
| Energy mode * | 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-max)*** | ***65/90***W | ***65/90***W | ***65/90***W | *Full load* | ☐ |
| **Category A** | | | | | |
| ***Idle State - WOL Enabled*** | W | W | W | *Use for ENERGY STAR Registration ($P_{idle}$)* | ☒ |
| ***Sleep (S3) - WOL Enabled*** | W | W | W | *Use for ENERGY STAR Registration ($P_{sleep}$)* | ☒ |
| ***Sleep (S3) - WOL Disabled*** | W | W | W | *Reference* | ☒ |
| ***Off (S5) - WOL Enabled*** | W | W | W | *Use for ENERGY STAR Registration ($P_{off}$)* | ☒ |
| ***Off (S5) - WOL Disabled*** | W | W | W | *Use for EuP* | ☒ |
| **Category B** | | | | | |
| ***Idle State - WOL Enabled*** | *7.883* W | *7.943* W | *8.14* W | *Use for ENERGY STAR Registration ($P_{idle}$)* | ☐ |
| ***Sleep (S3) - WOL Enabled*** | *1.052* W | *1.054* W | *1.107* W | *Use for ENERGY STAR Registration ($P_{sleep}$)* | ☐ |
| ***Sleep (S3) - WOL Disabled*** | *0.994* W | *0.997* W | *1.049* W | *Reference* | ☐ |
| ***Off (S5) - WOL Enabled*** | *0.444* W | *0.447* W | *0.5* W | *Use for ENERGY STAR Registration ($P_{off}$)* | ☐ |
| ***Off (S5) - WOL Disabled*** | *0.468* W | *0.468* W | *0.468* W | *Use for EuP* | ☐ |
| EPS No-load (External power supply / charger plugged in the wall outlet but disconnected from the product.) | *0.091*W | *0.095*W | *0.139*W | *Energy Star* | ☐ |
| TEC Typical Energy Consumption | 0.461 kWh/week | 0.464 kWh/week | 0.48 kWh/week | | ☐ |
| $E_{TEC}$ * Annual Energy Consumption | 23.972 kWh/year | 24.147 kWh/year | 24.99 kWh/year | ***$E_{TEC}$ = (8760/1000) x ($P_{off}$ x 0.6 + $P_{sleep}$ x 0.1 + $P_{idle}$ x 0.3)*** | ☐ |
| | ***$P_{off}$: Off Mode(S5) - WOL Enabled; $P_{sleep}$: Sleep Mode(S3) - WOL Enabled; $P_{idle}$: Idle State - WOL Enabled*** | | | | |
| Display resolution : ***1024*600*** Megapixels | | | | ***Specification*** | ☐ |
| Print Speed : Images per minute | | | | | ☒ |
| Default time to enter energy save mode: **10**(to display off),**20**(to sleep) minutes | | | | ***Energy star*** | ☐ |
| P9.2* | Information about the energy save function is provided with the product. | | | | ☒ ☐ ☐ |
| P9.3* | The product meets the energy requirements of the following voluntary program/s:<br>ENERGY STAR® version:***5.2*** Product category: ***Notebook computer***<br>Others specify: | | | | ☒ ☐ ☐<br>☐ ☒ ☐ |
| **P10** | **Emissions** | | | | |
| | **Noise emission** – Declared according to ISO 9296 | | | | |

| P10.1 | Mode | Mode description | Declared A-weighted sound power level $L_{WAd}$ (B) | Declared A-weighted sound pressure level $L_{pAm}$ (dB) | | |
|---|---|---|---|---|---|---|
| | | | | Operator position ☒ | Bystander positions ☐ (only if product is not operator attended) | |
| | | | | Desktop ☐ or Desk side ☐ | | |
| | Idle | * ***System idle*** | *2.9 | *19.5* | | ☐ |
| | Operation | * ***CPU loading >90%*** | *3.4 | *24.8* | | ☐ |
| | Other mode | *ODD operating* | *4.8* | | | |
| | Measured according to: ☒ ISO7779 ☐ ECMA-74 ☐ Other (only if not covered by ECMA-74 with $L_{pAm}$ measurement distance m) | | | | | |
| P10.2 | The product meets the acoustic noise requirements of the following voluntary program/s: | | | | | ☐ ☒ ☐ |

| Model number * | ThinkPad Edge E435 M/T:3256 | | |
|---|---|---|---|
| Issue date * | 2012, May 16 | Logo | lenovo |

| Product environmental attributes - Market requirements (continued) | | Requirement met | | |
|---|---|---|---|---|
| Item | | Yes | No | n.a. |
| | **Chemical emissions from printing products** | | | |
| P10.3* | Test performed according to ECMA-328 (ISO/IEC 28360) standard ☐, other specify: | ☐ | ☐ | ☒ |
| P10.4 | Typical emission rate (print phase) is (mg/h): Dust Ozone Styrene Benzene TVOC | | | ☒ |
| P10.5 | Chemical emission requirements of the following voluntary program/s are met for : 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: *SDRRS* | ☒ | ☐ | ☐ |
| **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). | ☐ | ☐ | ☒ |
| P11.2* | Paper containing post-consumer recycled fibers can be used, provided that it meets the requirements of EN12281. | ☐ | ☐ | ☒ |
| P11.3* | 2-sided (duplex) printing/copying is an integrated product function. | ☐ | ☐ | ☒ |
| **P12** | **Ergonomics for computing products** | | | |
| P12.1* | The display meets the ergonomic requirements of ISO 9241-307 for visual display technologies. | ☐ | ☐ | ☒ |
| P12.2* | The physical input device meets the requirements of ISO 9995 and ISO 9241-410. | ☐ | ☐ | ☒ |
| **P13** | **Packaging and documentation** | | | |
| P13.1* | Product packaging material type(s): *carton & paper pad* weight (kg): *0.5785*<br>Product packaging material type(s): *paper cushion* weight (kg): *0.25*<br>Product packaging material type(s): *bag* weight (kg): *0.017* | | | |
| P13.2* | Product plastic packaging is free from PVC. | ☒ | ☐ | ☐ |
| 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: ***80%*** *(Japan only 70%)* | | | ☐ |
| **P14** | **Additional information (See Note B4)** | | | |
| | NOTE: Supplier makes no representations, guarantees, assurances or warranties whether express or implied, regarding the information contained in this document. All information provided by supplier in this document is provided based on supplier's knowledge available at the time of completion, and supplier shall have no obligation to update such information. The information provided here is approximate and provided for informational purposes only. See a Lenovo Account Representative for more 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*** | | | |

*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 |