

ECMA/TC38-TG3/2015/026 (Rev. 1 – 15 April 2015)

### Annex B2 - Product environmental attributes Notebooks and Tablets

The declaration may be published only when all rows and/or fields marked with \* are filled-in (n.a. for not applicable). Additional information regarding each item may be found under P15.

| Brand *                | Lenovo  | Log   | 0 |  |  |  |
|------------------------|---|-------|---|--|--|--|
| Company name *         | Lenovo  |       |   |  |  |  |
| Contact information *  | Lenovo Global Environmental Affairs Alvin L Carter            |       |   |  |  |  |
| e-mail address         |   |       |   |  |  |  |
|                        | 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:          |       |   |  |  |  |
|                        | http://www.lenovo.com/ecodeclaration                          |       |   |  |  |  |

| 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   |  |  |  |  |  |
| Commercial name *  | Lenovo 500e Chromebook                                       |  |  |  |  |  |
| Model number *   | 81ES   |  |  |  |  |  |
| Issue date *   | 2018-1-31  |  |  |  |  |  |
| 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.

#### About Annex B2

Annex B2 reflects Product environmental attributes relevant for Computers and Computer Monitors. The following items from the ECMA-370 Main body are not shown in the template: P4.1 – P4.3 Consumable materials

P9.1 TEC and Print speed

P10.2 - P10.3 Chemical emissions from printing products

P11.1 - P11.3 Consumable materials for printing products.

| Model nu  | mber *                | 81ES  | Logo              |             |      |      |
|-----------|-----------------------|---|-------------------|-------------|------|------|
| Issue dat | e *                   | 2018-1-31   |                   | Lena        |      | Отн  |
| Product   | environ               | mental attributes - Legal requirements  |                   | Require     | ment | met  |
| Item      |                       |   |                   | Yes         | No   | n.a. |
| P1        | Hazardo               | ous substances and preparations   |                   |             |      |      |
| P1.1*     | Products              | s do comply with current European RoHS Directive. (See legal reference and NOTE I   | B1)               | $\square$   |      |      |
| P1.2*     |                       | s do not contain Asbestos (see legal reference).<br>nt: Legal reference has no maximum concentration value.   |                   | $\square$   |      |      |
| P1.3*     | hydrobro<br>trichloro | s do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC),<br>omofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachlo<br>ethane, methyl bromide (see legal reference). Comment: Legal reference has no ma<br>ration values. | , , ,             |             |      |      |
| P1.4*     |                       | s do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlo<br>/I (PCT) in preparations (see legal reference).   | orinated          | $\square$   |      |      |
| P1.5*     | Products              | s do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carbo<br>ntaining at least 48% per mass of chlorine in the SCCP (see legal reference).  | on atoms in the   |             |      |      |
| P1.6*     | (see leg              | th direct and prolonged skin contact do not release nickel in concentrations above 0,<br>al reference).<br>nt: Max limit in legal reference when tested according to EN1811:2011-5.   | 5 μg/cm²/week     | $\square$   |      |      |
| P1.7*     |                       | Article 33 information about substances in articles is available at (add URL or mail co<br>ww.lenovo.com/social_responsibility/us/en/environment.html   | ontact):          | $\boxtimes$ |      |      |
| P2        | Batterie              | S   |                   |             |      |      |
| P2.1*     |                       | oduct contains a battery or an accumulator, the battery/accumulator is labeled with th<br>Information on proper disposal is provided in user manual. (See legal reference)  | e disposal        | $\boxtimes$ |      |      |
| P2.2*     | Batteries<br>referenc | s or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmire)   | um. (See legal    | $\boxtimes$ |      |      |
| P2.3*     | Batteries             | s and accumulators are readily removable. (See legal reference)   |                   | $\square$   |      |      |
| P3        | Conform               | nity verification & Eco design (ErP)  |                   |             |      |      |
| P3.1*     | The Dec               | duct is CE-marked to show conformance with applicable legal requirements (see lega<br>claration of Conformity can be requested at (add link or e-mail address):<br>www.lenovo.com/social responsibility/us/en/ec_doc_notebooks/                                   | al reference).    | $\boxtimes$ |      |      |
| P3.2*     |                       | duct complies with the Eco design requirements for energy-related products,   |                   |             |      |      |
|           |                       | al reference).  |                   |             |      |      |
|           | Require               | d information is; given in item P15 or added to this document, available at (add URL):  |                   | $\boxtimes$ |      |      |
|           | http://v              | www.lenovo.com/social_responsibility/us/en/datasheets_notebooks/  |                   |             |      |      |
| P5        |                       | t packaging   |                   |             |      |      |
| P5.1*     | Packagi               | ng and packaging components do not contain more than 0,01% lead, mercury,<br>ent chromium by weight of these together.  | cadmium and       | 1           |      |      |
| P5.2*     | The pac               | kaging materials are marked with abbreviations and numbers indicating the nature of<br>ee legal reference).   | f the material(s) | )           |      |      |
| P5.3*     | The pro<br>Protocol   | duct packaging material is free from ozone depleting substances as specified i<br>(see legal reference).<br>nt: Legal reference has no maximum concentration values.  | n the Montrea     | I 🔀         |      |      |
| P6        |                       | nt information  |                   |             |      |      |
| P6.1*     | Informat              | ion for recyclers/treatment facilities is available (see legal reference).  |                   | $\square$   |      |      |

NOTE B1 Restriction applies to the homogeneous material, unless other specified and expressed in weight %. Stating "Yes" means that the product is compliant with the mandatory requirements.

| Model number *     |  | 81ES  | Logo              |             |           |          |  |
|--------------------|--|---|-------------------|-------------|-----------|----------|--|
| Issue dat          | te *   | 2018-1-31   |                   | Len         | ovc       | ТМ       |  |
| Product            |  | mental attributes - Market requirements (See General NOTE GN  | · ·               |             |           |          |  |
|                    |  | onmental conscious design   |                   | Require     |           | met      |  |
| Item               |  | tory to fill in. Additional information regarding each item may be found under P14.   |                   | Yes         | No        | n.a.     |  |
| <b>P7</b><br>P7.1* |  | Disassembly, recycling<br>It have to be treated separately are easily separable   |                   |             |           |          |  |
| P7.2*              |  | naterials in covers/housing have no surface coating.  |                   |             |           |          |  |
| P7.3*              |  | arts > 100 g consist of one material or of easily separable materials.  |                   |             | <u> </u>  | <u> </u> |  |
| P7.4*              | Plastic parts > 100 g consist of one material of of easily separable materials.<br>Plastic parts > 25 g have material codes according to ISO 11469 referring ISO 1043-4. |   |                   |             |           |          |  |
| P7.5               |  | arts are free from metal inlays or have inlays that can be removed with commonly a  |                   |             | <u> </u>  | <u> </u> |  |
|                    |  |   |                   |             | <u> </u>  | <u> </u> |  |
| P7.6*              |  | re easily separable. (This requirement does not apply to safety/regulatory labels).   |                   |             |           |          |  |
| P7.7*              | Product  | g can be done e.g. with processor, memory, cards or drives  |                   |             |           |          |  |
| P7.8*              |  | ig can be done using commonly available tools   |                   |             | <u> </u>  | <u> </u> |  |
| P7.9               |  | arts are available after end of production for: 5 years   |                   |             |           | <u> </u> |  |
|                    |  |   |                   |             |           | <u> </u> |  |
| P7.10              |  | s available after end of production for: 5 years  |                   |             |           |          |  |
| P7.11*             |  | and substance requirements<br>cover/housing material type (e.g. plastics, metal, aluminum):   |                   |             |           |          |  |
| 1 7.11             |  | type: PC/ABS Material type: Material type: Material type:   | al type:          |             |           |          |  |
| P7.12              |  | n materials of external electrical cables are PVC free.   | , ypoi            |             | $\square$ |          |  |
| P7.13              | Insulation   | n materials of internal electrical cables are PVC free.   |                   |             |           |          |  |
| P7.14              | External   | plastic casing/cover parts > 25 g contain no more than 0,1% weight (1000 ppm) b   | romine and 0,1%   | ,           |           |          |  |
|                    |  | 1000 ppm) chlorine attributable to brominated flame retardants, chlorinated flame   |                   |             |           |          |  |
|                    |  | chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm)   | chlorine in part  | S           |           |          |  |
| P7.15              |  | Ig more than 25% post-consumer recycled content.<br>circuit boards, PCBs (without components) are low halogen: all  | 25 g are lov      |             | $\square$ |          |  |
|                    |  | as defined in IEC 61249-2-21. (See 1NOTE B2)  |                   | v 🛄         |           |          |  |
| P7.16              |  | tarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4:   |                   | $\square$   |           |          |  |
|                    |  | >PC+ABS-TD15FR(40)<   |                   |             |           |          |  |
| P7.17              |  | nemical specifications of flame retardants in printed circuit boards > 25 g (without c  |                   | $\boxtimes$ |           |          |  |
|                    | 26265-0  | A (additive), TBBPA (reactive) (See NOTE B3), Other: <b>Brominated epoxy</b>  | resin. CAS #:     |             |           |          |  |
|                    |  |   |                   |             |           |          |  |
|                    |  | nemical specifications of flame retardants in printed circuit boards (without compone<br>g ISO 1043-4: <i>FR(16)</i>  | ents) > 25 g      | $\bowtie$   |           |          |  |
| P7.18              |  | ame retarded plastic parts > 25 g contain the following flame retardant substance   | s/preparations in | า           |           |          |  |
|                    |  | ations above 0,1%:  |                   | $\boxtimes$ |           |          |  |
|                    |  | ical name: <b>BPADP</b> , CAS #: <b>181028-79-5</b> (See NOTE B4)   |                   |             |           |          |  |
|                    |  | ical name: , CAS #: "<br>ical name: , CAS #: "  |                   |             |           |          |  |
|                    |  |   | 2.4.              |             |           |          |  |
| P7.19              |  | nemical specifications of flame retardants in plastic parts > 25 g according ISO 104<br>parts > 25 g, flame retardant substances/preparations above 0,1% are used which |                   |             |           | <u> </u> |  |
| F7.19              | •  | I the following Risk phrases; and Hazard statements:  | I have been       |             | M         |          |  |
|                    | -  |   | See note B5)      |             |           |          |  |
| P7.20*             |  | sumer recycled plastic material content is used in the product (See Note B6):   |                   |             |           |          |  |
|                    |  |   |                   |             |           |          |  |
|                    |  | t least one of the two alternatives below shall be answered;  | t (appulated at   |             |           |          |  |
|                    | ,  | otal plastic parts' weight > 25 g, the postconsumer recycled plastic material conten<br>ercentage of total plastic by weight) is %.                                     | it (calculated as |             |           |          |  |
|                    | or   |   |                   |             |           |          |  |
|                    | b) The   | weight of recycled material is g.   |                   |             |           |          |  |

GENERAL NOTE Standard references should direct to the latest version of a standard. If an older version of a standard is used, section P15 shall be used for explanation.

NOTE B2 IEC 61249-2-21 defines maximum limits of 900 ppm for each of the substances chlorine and bromine and a maximum limit of 1500ppm of these substances combined. The standard does not address fluorine, iodine and astatine which are included in the group of halogens.

NOTE B3 and B4 A Guidance document on Chemical substances is available; see <a href="http://www.ecma-international.org/publications/standards/Ecma-370.htm">http://www.ecma-international.org/publications/standards/Ecma-370.htm</a>

NOTE B5 If a certain substance has been assigned a certain risk phrases / hazard statement in the referenced source, this does not necessarily mean the substance has been tested for all of the hazards referred to by a certain customer.

NOTE B6 Applies to a product containing plastic parts whose combined weight exceeds 100 g with the exception of printed circuit boards, cables, connectors and electronic components and bio-based plastic material.

| Model nu                              | mber *                              | 81ES                              |  |  |                                     | Logo                          |                                |             |
|---------------------------------------|-------------------------------------|-----------------------------------|--|--|-------------------------------------|-------------------------------|--------------------------------|-------------|
| Issue dat                             | e *                                 | 2018-1-3                          | 1  |  |                                     |                               | Lenovo                         | тм          |
| Product                               | environ                             | nental at                         | tributes - Market r                      | equirements (conti                         | nued)                               |                               | Requirement                    | t met       |
| Item                                  |                                     |                                   |  | •  | /                                   |                               | Yes No                         | n.a.        |
|                                       | Materia                             | and subs                          | stance requirements                      | (continued)                                |                                     |                               |                                |             |
| P7.21*                                | Biobase                             | d plastic m                       | aterial content is use                   | d in the product (See NO                   | DTE B7):                            |                               |                                |             |
|                                       | If YES: a                           | at least one                      | e of the two alternative                 | es below shall be answe                    | ered:                               |                               |                                |             |
|                                       |                                     |                                   |  | g, the biobased plastic i                  | material content (calcu             | lated as a percen             | tage                           |             |
|                                       |                                     | otal plastic                      | by weight) is %                          | 6.   |                                     |                               |                                |             |
|                                       | or<br>b) The                        | e weight of                       | the biobased plastic                     | material is g.                             |                                     |                               |                                |             |
| P7.22*                                |                                     |                                   |  | less than 0,1 mg/lamp.                     |                                     |                               |                                |             |
|                                       | If mercu                            | ry is used                        | specify: Number of la                    | mps: and maxim                             | um mercury content pe               | r lamp: mg                    |                                |             |
| P8                                    | Batterie                            |                                   |  |  |                                     |                               |                                |             |
| P8.1*                                 | Battery of                          | chemical c                        | omposition: <i>Lithium i</i>             | on   |                                     |                               |                                |             |
| P9                                    |                                     |                                   | tion (See NOTE B8)                       |  |                                     |                               |                                |             |
| P9.1                                  |                                     | product the                       | e following power leve<br>Power level at | ls or energy consumption<br>Power level at | ons are reported:<br>Power level at | Poforonaa/Star                | dard for oppravi               |             |
| Energy mo                             | JUE                                 |                                   | 100 V AC                                 | 115 V AC                                   | 230 V AC                            | modes and test                | dard for energy<br>method *    |             |
| Peak (On-                             | -max)                               |                                   | 45 W                                     | 45 W                                       | 45 W                                | Full load                     |                                |             |
| Catana                                |                                     |                                   |  |  |                                     |                               |                                |             |
| <u>Catego</u>                         | <u>y 11-</u>                        |                                   |  |  |                                     |                               |                                |             |
| Short Idle                            | State - W                           | /OL                               | 4.11 W                                   | 4.18 W                                     | 3.95 W                              | Use for ENERG                 |                                |             |
| Enabled                               |                                     |                                   |  |  |                                     | registration (P <sub>id</sub> | die)                           |             |
| Long Idle                             | State - W                           | OL                                | 1.77 W                                   | 1.82 W                                     | 1.89 W                              | Use for ENERG                 | Y STAR V6                      |             |
| Enabled                               |                                     |                                   |  |  |                                     | registration (Pid             | die)                           |             |
| Sleep (S3                             | ) - WOL D                           | isabled                           | 1.12 W                                   | 1.12 W                                     | 1.12 W                              | Reference                     |                                |             |
|                                       |                                     |                                   | 1.1 W                                    | 1.1 W                                      | 1.1 W                               | Use for ErP                   |                                |             |
| Off (S5) -                            |                                     | ibieu                             |  | 1.1 VV                                     |                                     | USE IOF EIP                   |                                |             |
| EPS No-lo                             |                                     |                                   | 0.02 W                                   | 0.02 W                                     | 0.07 W                              |                               |                                |             |
| (External power<br>wall outlet but di | supply / charger<br>sconnected from | r plugged in the<br>the product.) |  |  |                                     |                               |                                |             |
| PTEC *                                | 0                                   |                                   | 36.92 W                                  | 36.92 W                                    | 36.92 W                             |                               |                                | $\boxtimes$ |
| Typical En<br>ETEC *                  | lergy Cons                          | sumption                          | <b>18.4</b> kWh/year                     | 18.64 kWh/year                             | 18.18 kWh/year                      | $E_{TEO} = (8760/10)$         | 00) x (P <sub>off</sub> x 0.25 | $\square$   |
| Annual En                             | ergy Cons                           | umption                           | 10.4 KWIII/yeai                          | 10.04 KWII/yCal                            | 10. TO KWIII/year                   |                               | $P_{long \ ldle} \times 0.10+$ |             |
|                                       | 0,                                  |                                   |  |  |                                     | Pshort_Idle x 0.30)           | -                              |             |
|                                       |                                     | . =                               |  | OL Enabled; Psleep: Sleep                  |                                     | d; Pidle: Idle State -        | WOL Enabled                    |             |
|                                       |                                     | · ·                               |  | I Efficiency Marking Pro                   | otocol) ^ :                         |                               |                                | <u> </u>    |
|                                       |                                     |                                   | megapixels                               |  |                                     |                               |                                | <u> </u>    |
|                                       |                                     |                                   | ve mode: 30 minutes                      |  |                                     |                               |                                | <u> </u>    |
| P9.2*                                 |                                     |                                   |  | ion is provided with the                   | product.                            |                               |                                | Ц.          |
| P9.3                                  |                                     |                                   | class (monitors only):                   |  |                                     |                               |                                | $\bowtie$   |
| P10                                   | Emissio                             |                                   | Declared coording t                      |  | P0)                                 |                               |                                |             |
| P10.1                                 | Mode                                |                                   | Iode description                         | o ISO 9296 (See NOTE                       | Statistical upper limi              | t A-weighted sour             | d power level 1 mail           | (B)         |
|                                       | Idle                                |                                   | System Idle                              |  | * 16.3                              |                               |                                |             |
|                                       | Operatio                            |                                   | CPU;Operation                            |  | * 16.3                              |                               |                                | $\exists$   |
|                                       | Other m                             |                                   |  | nd pressure level (dB) $L_{p Am}$          |                                     | sition desktop – idle         | e)                             |             |
|                                       | Other m                             | ode 👖                             | eclared A-weighted sour                  | ad pressure level (dB) $L_{pAm}$           | (operator po                        | sition desktop – op           |                                |             |
|                                       |                                     |                                   |  | -  |                                     | sition desktop – op           | cratility)                     |             |
|                                       | Measure                             | ed accordir                       | ng to: 🔀 ISO 7779 🗌                      | ECMA-74                                    |                                     |                               |                                |             |
|                                       | 1                                   |                                   | Other                                    | (only if not covered by                    | ECMA-74)                            |                               |                                |             |

NOTE B7 The following is to be excluded from the calculation of percentage: printed circuit boards, labels, cables, connectors and electronic components and postconsumer recycled plastic

NOTE B8 A Guidance document on Energy Efficiency is available;

see http://www.ecma-international.org/publications/standards/Ecma-370.htm

NOTE B9 A Guidance document on Acoustic Noise is available; see <u>http://www.ecma-international.org/publications/standards/Ecma-370.htm</u>

| Model nu  | mber *                                      | 81ES Logo  | Long                       |                   |              |
|-----------|---|--|----------------------------|-------------------|--------------|
| lssue dat | e *   | 2018-1-31  | Lenc                       | Lenovo            |              |
| Product   | environ                                     | mental attributes - Market requirements (continued)  | Require                    | ment              | me           |
| ltem      |   |  | Yes                        | No                | n.a          |
|           |   | magnetic emissions   |                            |                   |              |
| P10.4     | Compute<br>program                          | er display meets the requirement for low frequency electromagnetic fields of the following voluntar<br>n(s):   | у                          |                   | $\mathbf{X}$ |
| P12       |   | mics for computing products  |                            |                   |              |
| P12.1*    | The disp                                    | play meets the ergonomic requirements of ISO 9241-307 for visual display technologies.   | $\mathbf{X}$               |                   |              |
| P12.2*    | The phy                                     | vsical input device meets the requirements of ISO 9995 and ISO 9241-410.   | $\boxtimes$                |                   |              |
| P13       | Packagi                                     | ing and documentation  |                            |                   |              |
| P13.1*    | Product                                     | packaging material type(s): cartonweight (kg): 0.296packaging material type(s): paperweight (kg): 0.00755packaging material type(s): EPEweight (kg): 0.05607       |                            |                   |              |
| P13.2*    |   | plastic primary packaging is free from PVC.  | $\square$                  |                   |              |
| P13.3*    | consum                                      | duct primary corrugated fiberboard packaging, specify the contained percentage of minimum per recovered fiber content: 90%   | post-                      |                   |              |
| P13.4*    |   | media for user and product documentation (tick box):<br>tronic, 🔀 Paper, 🔲 Other   |                            |                   |              |
| P13.5     | Úser an                                     | only complete this item if paper documentation used)<br>d product documentation on paper media is chlorine-free:<br>olease specify:                                |                            |                   |              |
|           | Totally o                                   | chlorine-free  | $\boxtimes$                |                   |              |
|           | -   | tal chlorine-free  |                            |                   |              |
|           | Process                                     | sed chlorine-free  | H                          |                   |              |
| P14       |   | ary programs   |                            |                   |              |
| P14.1     |   | duct meets the requirements of the following voluntary program(s):   |                            |                   |              |
|           | Eco-labe                                    | · · · · · · · · · · · · · · · · · · ·  |                            |                   |              |
|           | Eco-labe                                    |  |                            |                   |              |
| P15       |   | nal information (See NOTE B10)   |                            |                   |              |
| P9        |   | consumption of specific configuration may vary; description of the tested product configu  |                            |                   |              |
|           | informat<br>knowled<br>provideo<br>informat |  | ased on supplation. The in | olier's<br>format | ion          |
| P9        |   | ergy Star Qualified Notebooks & Tablet Computers for the latest information:<br>ww.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=CO |                            |                   |              |

NOTE B10 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 B2

| Reference  | Declaration item       |
|--|------------------------|
| Directive 2011/65/EU (RoHS Directive) * * Specific exemptions apply for certain products and applications.   | P1.1                   |
| Regulation (EC) 1907/2006(REACH, Annex XVII  | P1.2, P1.4, P1.6, P1.7 |
| Regulation (EC) 2037/2000, 2038/2000, 2039/2000<br>(Marketing and use of Ozone layer depleting<br>substances)  | P1.3, P5.3             |
| Norwegian regulation relating to restrictions on the use of certain dangerous chemicals 20.12.2002   | P1.5                   |
| Directive 2013/56/EC (Battery and accumulators<br>Directive) *<br>* These provisions shall not apply where, for safety,<br>performance, medical or data integrity reasons, continuity of<br>power supply is necessary and requires a permanent<br>connection between the appliance and the battery or<br>accumulator.            | P2.1, P2.2, P2,3, P8.1 |
| Directive 2006/95/EC (Low Voltage Directive)   | P3.1                   |
| Directive 2004/108/EC (EMC Directive)  | P3.1                   |
| Directive 1999/5/EC (R&TTE Directive)  | P3.1                   |
| Regulation (EC) 801/2013 amending Regulation (EC)<br>No 1275/2008 with regard to ecodesign requirements for<br>standby, off mode electric power consumption of<br>electrical and electronic household and office<br>equipment, and amending Regulation (EC) No 642/2009<br>with regard to ecodesign requirements for televisions | P3.1, P3.2             |
| Regulation (EC) No 1272/2008 (CLP Regulation)  | P7.19                  |
| Directive 2004/12/EC (Packaging Directive)   | P5.1                   |
| Decision 97/129/EC (Secondary packaging legislation)   | P5.2                   |
| Directive 2012/19/EU (WEEE directive)  | P6.1                   |

# 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        | Error! Reference source not found. | Logo   |
|------------------------|------------------------------------|--------|
| Model Number           | 81ES                               |        |
| Issue Date             | 2018-1-31                          | Lenovo |
| Additional information |                                    |        |

| P7.1.1   | Product environmental attributes  |                        |                        |                     |                  |  |  |  |  |
|--|---|------------------------|------------------------|---------------------|------------------|--|--|--|--|
| (d)  | Year of manufacture:  |                        |                        |                     | 2018             |  |  |  |  |
| (e)  | <b>Etec value</b> (kWh) per ErP Lot 3 Category and capability adjustments applied when <b>all discrete graphics cards (dGfx) are disabled</b> and if the system is tested with switchable graphics mode with UMA driving the display. |                        |                        |                     |                  |  |  |  |  |
| (f)  | Etec value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics cards (dGfx) are enable   |                        |                        |                     |                  |  |  |  |  |
|  | Category A<br>(according to ErP Lot 3)Category B<br>(according to ErP Lot 3)Category C<br>(according to ErP Lot 3)Category D<br>(according to ErP Lot 3)  |                        |                        |                     |                  |  |  |  |  |
|  | Memory over base [GB]   | 4GB                    |                        |                     |                  |  |  |  |  |
| nents<br>sting                                   | Additional internal storage   | NO<br>(Yes / No)       | (Yes / No)             | (Yes / No)          | (Yes / No)       |  |  |  |  |
| capability adjustments<br>applied during testing | Discrete television tuner   | NO<br>(Yes / No)       | (Yes / No)             | (Yes / No)          | (Yes / No)       |  |  |  |  |
| ability a  | Discrete Audio Card   | NO<br>(Yes / No)       | (Yes / No)             | (Yes / No)          | (Yes / No)       |  |  |  |  |
| cap  | Discrete graphics Card(s) [number / #]  | NO #:<br>(Yes / No)    | #:<br>(Yes / No)       | #:<br>(Yes / No)    | #:<br>(Yes / No) |  |  |  |  |
|  | Category of discrete graphics Card(s)   |                        |                        |                     |                  |  |  |  |  |
| sults  | Etec Value (kWh) - dGfx disabled<br>all discrete graphics cards (dGfx) are disabled/<br>UMA is active for switchable graphics/<br>product has no graphics cards (dGfx)  | 18.6                   |                        |                     |                  |  |  |  |  |
| Test results                                     | Etec Value (kWh) - dGfx enabled<br>all discrete graphics cards (dGfx) are enabled   |                        |                        |                     |                  |  |  |  |  |
| (g)  | Idle state power demand (Watts);  | -                      |                        |                     | 4.18             |  |  |  |  |
| (h)  | Sleep mode power demand (Watts);  |                        |                        |                     | 1.12             |  |  |  |  |
| (i)  | Sleep mode with WOL enabled power do  | emand (Watts) (where   | enabled);              |                     |                  |  |  |  |  |
| (j)  | Off mode power demand (Watts);  |                        |                        |                     | 1.12             |  |  |  |  |
| (k)  | Off mode with WOL enabled power dem   | and (Watts) (where en  | abled);                |                     |                  |  |  |  |  |
| (I)  | Internal power supply efficiency at 10 %  | 20 %, 50 % and 100 s   | % of rated output powe | er (if applicable): |                  |  |  |  |  |
|  | 10% 20% 50%   | 100% Avera             | ige                    |                     |                  |  |  |  |  |
| (m)  | External power supply efficiency (if appli  | cable)*:               |                        |                     |                  |  |  |  |  |
|  | Average active efficiency: 89.23%, 87.  | 25%, 89.44%, 81.44     | %                      |                     |                  |  |  |  |  |
|  | *internal note: show values for all available external p  |                        |                        |                     |                  |  |  |  |  |
| (o)  | Minimum number of loading cycles that t   | ne batteries can withs | and (applies only to n | otebook computers): | 300              |  |  |  |  |
| (p-1)  | p-1) Measurement methodology used to determine information mentioned in points (I) – internal PSU efficiency:<br>N/A  |                        |                        |                     |                  |  |  |  |  |

|  | Measurement methodology used to determine information mentioned in points (m) – external PSU efficiency:<br>ENERGY STAR® Program Requirements for Single Voltage External Ac-Dc and Ac-Ac Power Supplies<br>Eligibility Criteria (Version 2.0)  |   |       |  |  |  |  |
|--|---|---|-------|--|--|--|--|
| (p-3) Measuremer   | t methodology used to determine information mentioned in<br><i>≥</i> 70% of Cmin  | points (o) – loading cycles batteries:          |       |  |  |  |  |
|  | t methodology used to determine information mentioned in r<br>ined in Point P9.1 in the Product IT Eco Declaration:<br>IEC 62623  | naximum, idle, sleep, off mode                  |       |  |  |  |  |
| (q) Sequence of  | Sequence of steps for achieving a stable condition with respect to power demand::<br>Power on -> Wait 5 minutes ->Stable condition  |   |       |  |  |  |  |
| (r) Description of   | Description of how sleep and/or off mode was selected or programmed:<br>Begin menu -> Power -> Select sleep or off mode   |   |       |  |  |  |  |
| (s) Sequence of off mode:  | events required to reach the mode where the equipment au  | tomatically changes to sleep and/or             |       |  |  |  |  |
|  | NA  |   |       |  |  |  |  |
|  | idle state condition before the computer automatically r<br>ch does not exceed the applicable power demand requirem   |   | 30min |  |  |  |  |
| (u) Length of til<br>mode that h   | ne after a period of user inactivity in which the compute<br>as a lower power demand requirement than sleep mode (ir  | er automatically reaches a power<br>n minutes): | NA    |  |  |  |  |
|  | ne before the display sleep mode is set to activate after<br>on the energy-saving potential of power management functio<br><i>Refer to User Guide</i>   |   | 10min |  |  |  |  |
| (x) User informa   | tion on how to enable the power management functionality:<br><i>Refer to User Guide</i>   |   |       |  |  |  |  |
|  | ters for measurements: — test voltage in V and frequency ir<br>v supply system, — information and documentation on the in<br>trical testing:<br>230V50HZ-2%-Edition 2.0, 2011-01, Section 4   | strumentation, set-up and circuits              |       |  |  |  |  |
| Additional Notebook  | Battery Information:  |   |       |  |  |  |  |
|  | Battery[ies] not user replaceable   | Battery[ies] user replaceable                   | n/a   |  |  |  |  |
|  | The battery[ies] in this product cannot be easily replaced by users themselves. $^{\rm 1)}$   |   |       |  |  |  |  |
| Internal/built-in Batter   |   |   |       |  |  |  |  |
| External/detachable B  | attery  |   |       |  |  |  |  |
| Bios Backup Battery  |   |   |       |  |  |  |  |
| Other:   |   |   |       |  |  |  |  |
| Additional information   |   |   |       |  |  |  |  |
|  |   |   |       |  |  |  |  |
| 1)   |   |   |       |  |  |  |  |
| The battery[ies] in this product of<br>Akywynarophara[vre] δатерия]<br>Las baterias de este producto n<br>Výměnu baterie/baterií v tomto<br>Brugeren kan ikke uden videre<br>Der Akku/die Akkus dieses Proc<br>Kasutajad ei saa selle toote aku<br>Hµπαταρία[-sc] στο προϊόν αυτ<br>La/les batterie(s présente(s) da<br>Korisnik ne može lako zamijenit<br>La batteria/le batterie in questo<br>Lietotāji paši nevar nomainīt šā<br>Šio gaminio baterijos [bateriju] ŗ<br>A termék akkumulátorát/akkum<br>II-batterija/batteriji f'dan iI-prodo<br>Batteriat [ene] i dette produktet<br>De batterij(en) in dit product is (<br>Użytkownik nie može sam v łat<br>A ou as baterias deste produ<br>Bateria (bateriile) din acest proc<br>Bateria (bateriile) din scest proc | ats vartotojas negali lengvai pakeisti.<br>Jlátorait a felhasználó nem tudja egyedül egyszerűen kicserélni.<br>it ma tistax/jistgħux tiġi/jiġu sostitwita/i mill-utenti stess.<br>kan ikke lett erstattes av brukerne selv.<br>zijn) door de gebruiker niet gemakkelijk vervangbaar.<br>wy sposób wymienić baterii w tym produkcie.<br>não podem ser facilmente substituídas pelos próprios utilizadores.<br>lus nu poate (pot) fi uşor înlocuită (înlocuite) de utilizatorii înșiși. | werden.   |       |  |  |  |  |
| Tämän tuotteen akku [akut] ei[v  | ät] ole helposti käyttäjän vaihdettavissa.<br>siäly byta ut batteriet/batterierna   |   |       |  |  |  |  |