

EN

EN

EN



EUROPEAN COMMISSION

Brussels, xxx  
C(2010) yyy final

Draft

**COMMISSION DELEGATED REGULATION (EU) No .../..**

**of [...]**

**implementing Directive 2010/.../EU of the European Parliament and of the Council with  
regard to energy labelling of household dishwashers**

## EXPLANATORY MEMORANDUM

### (1) CONTEXT OF THE PROPOSAL

#### • Grounds for and objectives of the proposal

Household dishwashers are covered by Commission Directive 97/17/EC implementing Council Directive 92/75/EEC with regard to energy labelling of household dishwashers. The scheme provides standardised information on energy consumption of household dishwashers by means of a ranking of products on a scale from A to G.

Since recent market changes call for revision of the labelling scheme, the *Action Plan for Energy Efficiency: Realising the Potential*<sup>1</sup> identified ‘wet’ household appliances (i.e. household washing machines and dishwashers) as one of the 14 priority product groups for which the existing labelling scheme should be updated.

The aim of this delegated Regulation is to introduce new, more ambitious, energy efficiency classes in order to adapt them to technological developments and introduce more dynamism into the scheme. It complements the draft Commission Regulation implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household dishwashers.

#### • General context

The market failure can be explained by the fact that energy-efficient household dishwashers are usually more expensive at the time of purchase, even if they have significant cost savings potential over the life cycle. The benefits are often unclear or irrelevant to the person making the purchasing decision.

This problem has been addressed over the last 10 years by the labelling scheme set out in Directive 97/17/EC, leading to an energy efficiency improvement of 35 %.

However, with 90 % of products in class A, the labelling scheme no longer leaves any room for product differentiation despite the technological potential.

According to the preparatory study, the total number of household dishwashers in the EU-27 was 70 million units in 2005, with an annual electricity consumption of 25 TWh, or 13 million tonnes of CO<sub>2</sub> equivalent. This figure would increase to 35 TWh in 2020 without further action. It is estimated that the combined effect of the proposed ecodesign requirements and a revised labelling scheme would lead to annual electricity and water savings of 2.3 TWh of electricity (1.1 Mt of CO<sub>2</sub> equivalent) and 63 million m<sup>3</sup> of water, respectively, in 2020 compared with the baseline scenario.

#### • Existing provisions in the area of the proposal

In addition to the draft Commission Regulation implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household dishwashers, the following measures are relevant for household dishwashers:

---

<sup>1</sup> COM(2006) 545.

- Directive 2006/95/EC<sup>2</sup> of the European Parliament and of the Council of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (the Low Voltage Directive or LVD);
- Directive 2002/96/EC<sup>3</sup> of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (the WEEE Directive);
- Directive 2002/95/EC<sup>4</sup> of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (the RoHs Directive);
- Regulation (EC) No 66/2010<sup>5</sup> of the European Parliament and of the Council of 25 November 2009 on the EU Ecolabel;
- Commission Regulation No 1275/2008 implementing Directive 2005/32/EC with regard to ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment<sup>6</sup>.

It was decided to exclude household dishwashers equipped with a sensor-based safety function (designed to avoid water leakages) from the horizontal requirements on standby which are laid down in that Regulation<sup>7</sup>. The proposed new algorithm developed for the calculation of the Energy Efficiency Index of household dishwashers on which the energy efficiency classes are based considers the overall annual energy consumption including the energy consumption of the two low-power modes, thus ensuring that further energy efficiency improvements are achieved on these parameters.

- **Consistency with other EU policies and objectives**

Increased market take-up of energy-efficient household dishwashers, through the introduction of a revised energy labelling scheme, will contribute to achieving the 20 % energy savings potential anticipated by 2020 in the Energy Efficiency Action Plan (COM(2006) 545).

Furthermore, implementation of Directive 2010/.../EC<sup>8</sup> contributes to the EU's objective to attain a reduction in greenhouse gases of at least 20 % in 2020.

Promotion of market take-up of efficient household dishwashers complies with the Lisbon and renewed Sustainable Development Strategy as it will encourage investment in R&D and make for a level playing field. It is also in line with the Sustainable Consumption, Production and Industrial Policy Action Plan (COM(2008) 397).

Finally, it will contribute to the objective of decoupling economic growth from the use of resources set out in the Europe 2020 strategy (COM(2010) 2020) under the flagship initiative: 'resource efficient Europe'.

---

<sup>2</sup> OJ L 374, 27.12.2006, p. 10.

<sup>3</sup> OJ L 37, 13.2.2003, p.24.

<sup>4</sup> OJ L 37, 13.2.2003, p. 19.

<sup>5</sup> OJ L 27, 30.1.2010, p. 1–19.

<sup>6</sup> OJ L 339, 18.12.2008, p. 45.

<sup>7</sup> If the machine does not provide in such protection function(s), the two modes are subject to the specific requirements of the standby Regulation.

<sup>8</sup> Numbering of the recast of Directive 92/75/EEC to be added as soon as it is published in the OJ

## (2) CONSULTATION OF INTERESTED PARTIES AND IMPACT ASSESSMENT

### • Consultation of interested parties

#### Consultation methods, main sectors targeted and general profile of respondents

Stakeholders were consulted from the very beginning of the preparatory study as well as through several public consultations held on 4 December 2008 and 26 March 2010, gathering representatives of Member States, environmental NGOs, European consumer organisations, suppliers and distributors.

Commission staff presented on 26 March 2010 a refined working document for public consultation of all experts, adapting energy efficiency classes in line with Article 10(4)(d) of Directive 2010/.../EU<sup>9</sup>. The working document was sent out one month before the meeting and uploaded to the Commission's CIRCA system alongside the stakeholder comments received in writing.

#### Summary of responses and how they have been taken into account

All respondents throughout the consultation process generally supported the setting of new energy efficiency classes with comments on the following issues:

- Some stakeholders suggested introducing class A+++ from the start on the label on the ground that this class could be already populated by some extremely efficient models from the first date of application of the draft delegated Regulation. The draft act was amended accordingly.
- The draft delegated Regulation initially proposed that all household dishwashers - including those placed on the market before the application of the new label - would be labelled and displayed at the point of sale in accordance with the new provisions and label format from 16 months after publication of the measure in the OJ. However, a majority of stakeholders and experts supported the view that appliances placed on the market before the entry into effect of the new measures should be allowed to be labelled and displayed at the point of sale in accordance with Directive 97/17/EC. The draft delegated Regulation was amended accordingly.
- Stakeholders, in particular suppliers and distributors, emphasised that they needed a transitional period between the first application date of the new label (12 months after publication in the OJ) and the date of mandatory display of the new classes in advertisements and technical promotional material. This 4-month transitional period is necessary for them to adapt and publish their promotional material, catalogues or websites. The draft delegated Regulation therefore integrates this time constraint.
- Some stakeholders asked for the measurement uncertainty to be reduced. The proposed Regulation provides for the measurement uncertainty to be reduced from 15 % to 10 %. The scope for further reduction should be assessed in the light of the round robin test to be carried out in the near future under the mandate given to Cenelec for the design of a new testing standard.

- **Collection and use of expertise**

Scientific/expertise domains concerned

The preparatory study run on household dishwashers within the framework of the ecodesign Directive 2009/125/EC (former Directive 2005/32/EC) provided a solid technical, environmental and economic analysis which was directly relevant for energy labelling. It was carried out by consortia of external consultants on behalf of the Commission's Directorate-General for Transport and Energy (DG TREN), now the Directorate-General for Energy (DG ENER), and submitted for scrutiny to the stakeholders from the very start.

Main organisations/experts consulted

The preparatory study was conducted in an open process that took into account input from relevant stakeholders, including suppliers and manufacturing associations, environmental NGOs, consumer organisations, EU/EEA Member State experts and international organisations such as the International Energy Agency (IEA).

Summary of advice received and used

No potentially serious risks with irreversible consequences were mentioned.

The technical, market and economic analysis carried out in the framework of the preparatory study resulted in recommendations on ecodesign requirements and labelling. These recommendations were used as a basis for suggesting possible energy efficiency classes for public consultation.

Means used to make the expert advice publicly available

The preparatory study was given a dedicated website where interim results and further relevant materials were published regularly for timely stakeholder consultation and input. Written submissions from stakeholders are listed in the final reports. The study website was promoted on the ecodesign-specific websites of the former Transport and Energy DG (now DG ENER) and the Enterprise and Industry DG.

- **Impact assessment**

Labelling has to be considered together with other policy options such as self-regulation or the setting of minimum performance (energy efficiency) requirements. An impact assessment was carried out pursuant to Article 15(4)(b) of Directive 2005/32/EC which also examined the option of labelling. The options listed below were discarded at an early stage:

- no EU action (legislation currently in place would not be amended, no new legislation would be adopted);
- support a voluntary commitment (none was tabled);
- adopt new ecodesign requirements only (with no revision of the labelling scheme);

---

<sup>9</sup> Numbering of the recast of Directive 92/75/EEC to be added as soon as it is published in the OJ

- revise the labelling scheme only (with no new ecodesign requirements).

The option which appeared the most appropriate and which was also advocated by all stakeholders was to revise the labelling scheme and adopt ecodesign requirements in a coordinated approach.

It will ensure that:

- ongoing energy improvements are maintained and fostered;
- fair competition and product differentiation continues to operate on energy improvements;
- the cost-effective level of energy consumption is reached;
- the competitiveness of the industry is supported through the expansion of the EU internal market for sustainable products;
- the burdens on suppliers including SMEs are not excessive, as the transition periods take redesign cycles into account;
- there is no negative impact on employment in the EU.

### **(3) LEGAL ELEMENTS OF THE PROPOSAL**

#### **• Summary of the proposed action**

The measure sets out new mandatory information requirements for placing household dishwashers on the market and displaying labels at the point of sale to allow end-users to be informed on their energy consumption during use. New energy efficiency classes A+, A++ and A+++ are introduced on the label on top of class A as well as requirements related to the advertising of those appliances.

#### **• Legal basis**

The draft delegated Regulation implements Directive 2010/.../EU<sup>10</sup>, and in particular Article 10 thereof. It is based on Article 194 TFEU.

#### **• Subsidiarity principle**

The draft delegated Regulation implements Directive 2010/.../EU<sup>11</sup> in line with Article 10.

#### **• Proportionality principle**

In accordance with the principle of proportionality, this measure does not go beyond what is necessary in order to achieve the objective.

The form of the implementing measure is a delegated Regulation which is directly applicable

---

<sup>10</sup> Numbering of the recast of Directive 92/75/EEC to be added as soon as it is published in the OJ

<sup>11</sup> Numbering of the recast of Directive 92/75/EEC to be added as soon as it is published in the OJ

in all Member States. This ensures that national and EU administrations will not incur any costs for transposition of the implementing legislation into national legislation.

In terms of conformity assessment, there are no extra costs with respect to the current situation, where energy labelling is already mandatory.

- **Choice of instrument**

Proposed instrument: delegated Regulation.

Other means would not be adequate for the following reasons.

The proposed form of action is a delegated Regulation (implementing framework Directive 2010/.../EU<sup>12</sup>), because the objectives of the action can be achieved most efficiently by fully harmonised requirements (including timely entry into force) throughout the EU, ensuring free movement of compliant appliances and avoiding market fragmentation.

#### **(4) BUDGETARY IMPLICATIONS**

The proposal has no implications for the EU budget.

#### **(5) ADDITIONAL INFORMATION**

- **Review/revision/sunset clause**

The proposal includes a revision clause.

- **European Economic Area**

The proposed act concerns an EEA matter and should therefore extend to the European Economic Area.

---

<sup>12</sup> Numbering of the recast of Directive 92/75/EEC to be added as soon as it is published in the OJ

Draft

**COMMISSION DELEGATED REGULATION (EU) No .../..**

**of [...]**

**implementing Directive 2010/.../EU of the European Parliament and of the Council with regard to energy labelling of household dishwashers**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/.../EU of the European Parliament and of the Council on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products<sup>13</sup> and in particular Article 10 thereof,

Whereas:

- (1) Directive 2010/.../EU requires the Commission to adopt delegated acts as regards the labelling of energy-related products representing significant potential for energy savings and having a wide disparity in performance levels with equivalent functionality.
- (2) Provisions on the energy labelling of household dishwashers were established by Commission Directive 97/17/EC of 16 April 1997 implementing Council Directive 92/75/EEC with regard to energy labelling of household dishwashers<sup>14</sup>.
- (3) The electricity used by household dishwashers accounts for a significant share of total household electricity demand in the Union. In addition to the energy efficiency improvements already achieved, the scope for further reducing the energy consumption of household dishwashers is substantial.
- (4) Directive 97/17/EC should be repealed and new provisions should be laid down by this Regulation in order to ensure that the energy label provides dynamic incentives for suppliers to further improve the energy efficiency of household dishwashers and to accelerate the market transformation towards energy-efficient technologies.
- (5) The information provided on the label should be obtained through reliable, accurate and reproducible measurement procedures, which take into account the recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to

---

<sup>13</sup> [NOTE: Directive number and OJ L reference to be inserted as soon as it is known, i.e. after the final adoption and publication of the recast Directive 92/75/EEC – expected around May/June 2010].

<sup>14</sup> OJ L 118, 7.5.1997, p. 1.

Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on Information Society services<sup>15</sup>.

- (6) This Regulation should specify a uniform design and content for the label for household dishwashers.
- (7) In addition, this Regulation should specify requirements as to the technical documentation and the fiche for household dishwashers.
- (8) Moreover, this Regulation should specify requirements as to the information to be provided for any form of distance selling, advertisements and technical promotional materials for household dishwashers.
- (9) It is appropriate to provide for a review of the provisions of this Regulation taking into account technological progress.
- (10) In order to facilitate the transition from Directive 97/17/EC to this Regulation, it is appropriate to provide that household dishwashers labelled in accordance with this Regulation are to be considered compliant with Directive 97/17/EC.
- (11) Directive 97/17/EC should therefore be repealed,

HAS ADOPTED THIS REGULATION:

*Article 1*  
*Subject matter and scope*

This Regulation establishes requirements for the labelling of and the provision of supplementary product information on electric mains-operated household dishwashers and electric mains-operated dishwashers that can also be powered by batteries, including those sold for non-household use and built-in household dishwashers.

*Article 2*  
*Definitions*

In addition to the definitions laid down in Article 2 of Directive 2010/.../EU, the following definitions shall apply for the purpose of this Regulation:

- (1) “household dishwasher” means a machine which cleans, rinses, and dries dishware, glassware, cutlery and cooking utensils by chemical, mechanical, thermal, and electric means and which is designed to be used principally for non-professional purposes;
- (2) “built-in household dishwasher” means a household dishwasher intended to be installed in a cabinet, a prepared recess in a wall or a similar location, requiring furniture finishing;

---

<sup>15</sup> OJ L 204, 21.7.1998, p. 37.

- (3) “place settings” means a defined set of crockery, glass and cutlery for use by one person;
- (4) “rated capacity” means the maximum number of place settings together with the serving pieces, as stated by the supplier, which can be treated in a household dishwasher on the programme selected, when loaded in accordance with the supplier’s instructions;
- (5) “programme” means a series of operations that are pre-defined and are declared as suitable by the supplier for specified levels of soil or type of load, or both, and together form a complete cycle;
- (6) “programme time” means the time that elapses from the initiation of the programme until the completion of the programme, excluding any end-user-programmed delay);
- (7) “cycle” means a complete cleaning, rinsing, and drying process, as defined for the selected programme;
- (8) “off-mode” means a condition where the household dishwasher is switched off using appliance controls or switches accessible to and intended for operation by the end-user during normal use to attain the lowest power consumption that may persist for an indefinite time while the household dishwasher is connected to a power source and used in accordance with the supplier’s instructions; where there is no control or switch accessible to the end-user, ‘off-mode’ means the condition reached after the household dishwasher reverts to a steady-state power consumption on its own;
- (9) “left-on mode” means the lowest power consumption mode that may persist for an indefinite time after completion of the programme and unloading of the household dishwasher without any further intervention by the end-user;
- (10) “equivalent dishwasher” means a model of household dishwasher placed on the market with the same rated capacity, technical and performance characteristics, energy and water consumption and airborne acoustical noise emissions as another model of household dishwasher placed on the market under a different commercial code number by the same supplier;
- (11) “end-user” means a consumer buying or expected to buy a household dishwasher;
- (12) “point of sale” means a location where household dishwashers are displayed or offered for sale, hire or hire-purchase.

*Article 3*  
*Responsibilities of suppliers*

Suppliers shall ensure that:

- (a) each household dishwasher is supplied with a printed label in the format and containing information as set out in Annex I;
- (b) a product fiche, as set out in Annex II, is made available;

- (c) the technical documentation as set out in Annex III is made available on request to the authorities of the Member States and to the Commission;
- (d) any advertisement for a specific model of household dishwasher contains the energy efficiency class, if the advertisement discloses energy-related or price information;
- (e) any technical promotional material concerning a specific model of household dishwasher which describes its specific technical parameters includes the energy efficiency class of that model.

*Article 4*  
*Responsibilities of dealers*

Dealers shall ensure that:

- (a) each household dishwasher, at the point of sale, bears the label provided by suppliers in accordance with Article 3(1) on the outside of the front or top of the household dishwasher, in such a way as to be clearly visible;
- (b) household dishwashers offered for sale, hire or hire-purchase where the end-user cannot be expected to see the household dishwasher displayed, are marketed with the information provided by suppliers in accordance with Annex IV;
- (c) any advertisement for a specific model of household dishwasher contains a reference to its energy efficiency class, if the advertisement discloses energy-related or price information;
- (d) any technical promotional material concerning a specific model of household dishwasher which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

*Article 5*  
*Measurement methods*

The information to be provided under Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement methods, which take into account the recognised state-of-the-art measurement methods.

*Article 6*  
*Verification procedure for market surveillance purposes*

Member States shall apply the procedure laid down in Annex V when assessing the conformity of the declared energy efficiency class, the annual energy consumption, annual water consumption, drying efficiency index, programme time, power consumption in off-mode and left-on mode, duration of the left-on mode and airborne acoustical noise emissions.

*Article 7*  
*Revision*

The Commission shall review this Regulation in the light of technological progress no later than five years after its entry into force. The review shall in particular assess the verification tolerances set out in Annex V.

*Article 8*  
*Repeal*

Directive 97/17/EC shall be repealed from [date to be inserted: 12 months after entry into force of this Regulation].

*Article 9*  
*Transitional provisions*

1. Article 3 (d) and (e) and Article 4 (b), (c) and (d) shall not apply to printed advertisement and printed technical promotional material published before [date to be inserted: 16 months after the publication in the *Official Journal of the European Union* of the Regulation].
2. Household dishwashers placed on the market before [date to be inserted: 12 months after the publication in the *Official Journal of the European Union* of the delegated Regulation] shall comply with the provisions set out in Directive 97/17/EC.
3. Household dishwashers which comply with the provisions of this Regulation and which are placed on the market or offered for sale, hire or hire-purchase before [date to be inserted: 12 months after entry into force of the Regulation] shall be regarded as complying with the requirements of Directive 97/17/EC.

*Article 10*  
*Entry into force and application*

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from [date to be inserted: 12 months after entry into force of this Regulation]. However, Article 3(1) (d) and (e) and Article 4(b) (c) and (d) shall apply from [date to be inserted: 16 months after entry into force of this Regulation].

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, [...]

*For the Commission*  
*The President*

**ANNEX I**  
**Label**

**1. LABEL**



I  
II

III

IV

V  
VI  
VI  
VIII

[\* Numbering of the Regulation to be added on the label before publication in the OJ]

- (1) The following information shall be included in the label:
- I. supplier's name or trade mark;
  - II. supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific household dishwasher model from other models with the same trade mark or supplier's name;
  - III. the energy efficiency class determined in accordance with point 1 of Annex VI; the head of the arrow containing the energy efficiency class of the household dishwasher shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
  - IV. annual energy consumption ( $AE_C$ ) in kWh per year, rounded up to the nearest integer;
  - V. annual water consumption ( $AW_C$ ) in litres per year, rounded up to the nearest integer;
  - VI. the drying efficiency class determined in accordance with point 2 of Annex VI;
  - VII. rated capacity in standard place settings, for the standard cleaning cycle;
  - VIII. airborne acoustical noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer.
- (2) The design of the label shall be in accordance with point 2. By way of derogation, where a model has been granted a 'EU eco-label' under Regulation (EC) No 66/2010 of the European Parliament and of the Council, a copy of the EU eco-label may be added.



[\* Numbering of the Regulation to be added on the label before publication in the OJ]

Whereby:

- (a) The label shall be at least 110 mm wide and 220 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.
- (b) The background shall be white.
- (c) Colours shall be CMYK - cyan, magenta, yellow and black, following this example: 00-70-X-00: 0% cyan, 70% magenta, 100% yellow, 0% black.
- (d) The label shall fulfil all of the following requirements (numbers refer to the figure above):
  - ① **Border stroke:** 5 pt – colour: Cyan 100% – round corners: 3.5 mm.
  - ② **EU logo** – colours: X-80-00-00 and 00-00-X-00.
  - ③ **Energy logo:** colour: X-00-00-00. Pictogram as depicted; EU logo and energy logo (combined): width: 92 mm, height: 17 mm.
  - ④ **Sub-logos border:** 1 pt – colour: Cyan 100% – length : 92.5 mm.
  - ⑤ **A-G scale**
    - **Arrow:** height: 7 mm, gap: 0.75 mm – colours:
      - Highest class: X-00-X-00,
      - Second class: 70-00-X-00,
      - Third class: 30-00-X-00,
      - Fourth class: 00-00-X-00,
      - Fifth class: 00-30-X-00,
      - Sixth class: 00-70-X-00,
      - Last class: 00-X-X-00.
    - **Text:** Calibri bold 18 pt, capitals and white; '+' symbols: Calibri bold 12 pt, capitals, white, aligned on a single row.
  - ⑥ **Energy efficiency class**
    - **Arrow:** width: 26 mm, height: 14 mm, 100% black.
    - **Text:** Calibri bold 29 pt, capitals and white; '+' symbols: Calibri bold 18 pt, capitals, white, aligned on a single row.
  - ⑦ **Energy**
    - **Text:** Calibri regular 11 pt, capitals, black.
  - ⑧ **Annual energy consumption**
    - **Border:** 2 pt – colour: Cyan 100% – round corners: 3.5 mm.
    - **Value:** Calibri bold 37 pt, 100% black.

- **Second line:** Calibri regular 17 pt, 100% black.
- ⑨ **Annual water consumption:**
  - **Pictogram as depicted**
  - **Border:** 2 pt – colour: Cyan 100% – round corners: 3.5 mm.
  - **Value:** Calibri bold 24 pt, 100% black; and Calibri regular 16pt, 100% black.
- ⑩ **Drying efficiency class:**
  - **Pictogram as depicted**
  - **Border:** 2 pt – colour: Cyan 100% – round corners: 3.5 mm.
  - **Value:** Calibri regular 16 pt, horizontal scale 75%, 100% black; and Calibri bold 22 pt, horizontal scale 75%, 100% black.
- ⑪ **Rated capacity:**
  - **Pictogram as depicted**
  - **Border:** 2 pt – colour: Cyan 100% – round corners: 3.5 mm.
  - **Value:** Calibri bold 24 pt, 100% black; and Calibri regular 16pt, 100% black.
- ⑫ **Noise emissions:**
  - **Pictogram as depicted**
  - **Border:** 2 pt – colour: Cyan 100% – round corners: 3.5 mm.
  - **Value:** Calibri bold 24 pt, 100% black; and Calibri regular 16pt, 100% black.
- ⑬ **Supplier's name or trade mark**
- ⑭ **Supplier's model identifier**
- ⑮ The supplier's name or trademark and model identifier should fit in a space of 92 x 15 mm.
- ⑯ **Numbering of the Regulation:** Calibri bold 9 pt, 100% black.

**ANNEX II**  
**Product Fiche**

1. The information in the product fiche of the household dishwasher shall be provided in the following order or shall be included in the product brochure or other literature that accompanies the household dishwasher when sold to end-users:
  - (a) supplier's name or trade mark;
  - (b) supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household dishwasher model from other models with the same trade mark or supplier's name;
  - (c) rated capacity, in standard place settings, for the standard washing cycle;
  - (d) energy efficiency class, in accordance with point 1 of Annex VI;
  - (f) where the household dishwasher has been awarded an 'EU Ecolabel' under Regulation (EC) No 66/2010 of the European Parliament and of the Council<sup>16</sup>, this information may be included;
  - (g) annual energy consumption ( $AE_C$ ) in kWh per year, rounded up to the nearest integer. It shall be described as 'Energy consumption "X" kWh per year, based on 280 standard cleaning cycles using cold water fill and the consumption of the low power modes. Actual energy consumption will depend on how the appliance is used.';
  - (g) the energy consumption ( $E_t$ ) of the standard cleaning cycle;
  - (h) the power consumption in off-mode and left-on mode ( $P_o$  and  $P_l$ );
  - (h) annual water consumption ( $AW_C$ ), in litres per year, rounded up to the nearest integer; it shall be described as: 'Water consumption "X" kWh per year, based on 280 standard cleaning cycles. Actual water consumption will depend on how the appliance is used.';
  - (i) drying efficiency class determined in accordance with point 2 of Annex VI expressed as 'Drying efficiency class "X" on a scale from G (least efficient) to A (most efficient)'. Where this information is provided in a table, this may be expressed by other means provided it is clear that the scale is from G (least efficient) to A (most efficient);
  - (j) indication that the 'standard programme' is the standard cleaning cycle to which the information in the label and the fiche relates, that this programme is suitable to clean normally soiled tableware, and that it is the most efficient programme in terms of combined energy and water consumption;
  - (k) programme time for the standard cleaning cycle, in minutes and rounded to the nearest integer;

---

<sup>16</sup> OJ L 27, 30.1.2010, p 1.

- (n) the duration of the left-on mode ( $T_l$ ) if the household dishwasher is equipped with a power management system;
  - (l) airborne acoustical noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer;
  - (m) if the household dishwasher is intended to be built-in, an indication to this effect.
2. One fiche may cover a number of household dishwasher models supplied by the same supplier.
  3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided.

**Annex III**  
**Technical documentation**

1. The technical documentation referred to in Article 3 (c) shall include:
  - (a) the name and address of the supplier;
  - (b) a general description of the dishwasher model, sufficient for it to be unequivocally and easily identified;
  - (c) where appropriate, the references of the harmonised standards applied;
  - (d) where appropriate, the other technical standards and specifications used;
  - (e) identification and signature of the person empowered to bind the supplier;
  - (f) technical parameters for measurements as follows:
    - (i) *energy consumption,*
    - (ii) *water consumption,*
    - (iii) *programme time,*
    - (iv) *drying efficiency,*
    - (v) *power consumption in 'off-mode',*
    - (vi) *power consumption in 'left-on mode',*
    - (vii) *'left-on mode' duration,*
    - (viii) *airborne acoustical noise emissions;*
  - (g) the results of calculations performed in accordance with Annex VII.
2. Where the information included in the technical documentation file for a particular household dishwasher model has been obtained by calculation on the basis of design, or extrapolation from other equivalent household dishwashers, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The information shall also include a list of all other equivalent household dishwasher models where the information was obtained on the same basis.

#### **ANNEX IV**

#### **Information to be provided in the cases where end-users cannot be expected to see the product displayed**

1. The information referred to in Article 4(b), shall be provided in the following order:
  - (a) the energy efficiency class, as defined in point 1 of Annex VI;
  - (b) the rated capacity in standard place settings for the standard washing cycle;
  - (c) the annual energy consumption in kWh per year, rounded up to the nearest integer and calculated in accordance with point 1(b) of Annex VII;
  - (d) the annual water consumption in litres per year, rounded up to the nearest integer and calculated in accordance with point 3 of Annex VII;
  - (e) the drying efficiency class in accordance with point 2 of Annex VI;
  - (f) airborne acoustical noise emissions in dB(A) re 1 pW and rounded to the nearest integer;
  - (g) if the model is intended to be built-in, an indication to this effect.
2. Where other information contained in the product fiche is also provided, it shall be in the form and order specified in Annex II.
3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

## ANNEX V

### Verification procedure for market surveillance purposes

For the purposes of checking conformity with the requirements laid down in Articles 3 and 4, Member State authorities shall test a single household dishwasher. If the measured parameters do not meet the values declared by the supplier within the ranges set out in Table 1, the measurements shall be made on three more household dishwashers. The arithmetic mean of the measured values of these three household dishwashers shall meet the values declared by the supplier within the range defined in Table 1, except for the energy consumption, where the measured value shall not be greater than the rated value of  $E_t$  by more than 6%.

Otherwise, the model and all other equivalent household dishwasher models shall be considered not to comply with the requirements laid down in Articles 3 and 4.

Member State authorities shall use reliable, accurate and reproducible measurement procedures, which take into account the generally recognised state-of-the art measurement methods, including methods set out in documents the reference numbers of which have been published for that purpose in the Official Journal of the European Union.

**Table 1**

Measured parameter	Verification tolerances
Annual energy consumption	The measured value shall not be greater than the rated value* of $AE_C$ by more than 10%.
Water consumption	The measured value shall not be greater than the rated value of $W_t$ by more than 10%.
Drying efficiency index	The measured value shall not be less than the rated value of $I_D$ by more than 19%.
Energy consumption	The measured value shall not be greater than the rated value of $E_t$ by more than 10%.
Programme time	The measured value shall not be longer than the rated values $T_t$ by more than 10%.
Power consumption in off-mode and left-on mode	The measured value of power consumption $P_o$ and $P_l$ of more than 1.00 W shall not be greater than the rated value by more than 10%. The measured value of power consumption $P_o$ and $P_l$ of less than or equal to 1.00 W shall not be greater than the rated value by more than 0.10 W.
Duration of left-on mode	The value measured shall not be longer than the rated value of $T_l$ by more than 10%.
Airborne acoustical noise emissions	The measured value shall meet the rated value.

\* “rated value” means a value declared by the supplier

**ANNEX VI**  
**Energy efficiency classes and drying efficiency classes**

**1. ENERGY EFFICIENCY CLASSES**

The energy efficiency class of a household dishwasher shall be determined on the basis of its Energy Efficiency Index (*EEI*) as set out in Table 1.

The Energy Efficiency Index (*EEI*) of a household dishwasher shall be calculated in accordance with point 1 of Annex VII.

**Table 1: Energy efficiency classes**

Energy efficiency class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 50$
A++	$50 \leq EEI < 56$
A+	$56 \leq EEI < 63$
A	$63 \leq EEI < 71$
B	$71 \leq EEI < 80$
C	$80 \leq EEI < 90$
D (least efficient)	$90 \leq EEI$

**2. DRYING EFFICIENCY CLASSES**

The drying efficiency class of a household dishwasher shall be determined on the basis of its Drying Efficiency Index (*I<sub>D</sub>*) as set out in Table 2.

The Drying Efficiency Index (*I<sub>D</sub>*) shall be calculated in accordance with point 2 of Annex VII.

**Table 2: Drying efficiency classes**

Drying efficiency class	Drying Efficiency Index
A (most efficient)	$I_D > 1.08$
B	$1.08 \geq I_D > 0.86$
C	$0.86 \geq I_D > 0.69$
D	$0.69 \geq I_D > 0.55$
E	$0.55 \geq I_D > 0.44$
F	$0.44 \geq I_D > 0.33$
G (least efficient)	$I_D \geq 0.33$

**ANNEX VII**  
**Method for calculating the Energy Efficiency Index, the Drying Efficiency Index and water consumption**

**1. CALCULATION OF THE ENERGY EFFICIENCY INDEX**

For the calculation of the Energy Efficiency Index (*EEI*) of a household dishwasher model, the annual energy consumption of the household dishwasher is compared to its standard annual energy consumption.

- (a) The Energy Efficiency Index (*EEI*) is calculated as follows and rounded to one decimal place:

$$EEI = \frac{AE_C}{SAE_C} \times 100$$

where:

$AE_C$  = annual energy consumption of the household dishwasher;

$SAE_C$  = standard annual energy consumption of the household dishwasher.

- (b) The annual energy consumption ( $AE_C$ ) is calculated in kWh/year as follows and rounded to two decimal places:

$$(i) \quad AE_C = E_t \times 280 + \frac{\left[ P_o \times \frac{525600 - (T_t \times 280)}{2} + P_l \times \frac{525600 - (T_t \times 280)}{2} \right]}{60 \times 1000}$$

where:

$E_t$  = energy consumption for the standard cycle, in kWh and rounded to three decimal places;

$P_l$  = power in 'left-on mode' for the standard cleaning cycle, in W and rounded to two decimal places;

$P_o$  = power in 'off-mode' for the standard cleaning cycle, in W and rounded to two decimal places;

$T_t$  = programme time for the standard cleaning cycle, in minutes and rounded to the nearest minute;

280 = total number of standard cleaning cycles per year.

- (ii) Where the household dishwasher is equipped with a power management system, with the household dishwasher reverting automatically to 'off-mode'

after the end of the programme,  $AE_C$  is calculated taking into consideration the effective duration of 'left-on mode', according to the following formula:

$$AE_C = E_t \times 280 + \frac{\{(P_l \times T_l \times 280) + P_o \times [525600 - (T_l \times 280) - (T_l \times 280)]\}}{60 \times 1000}$$

where:

$T_l$  = measured time in 'left-on mode' for the standard cleaning cycle, in minutes and rounded to the nearest minute;

280 = total number of standard cleaning cycles per year.

(c) The standard annual energy consumption ( $SAE_C$ ) is calculated in kWh/year as follows and rounded to two decimal places:

(i) for household dishwashers with rated capacity  $ps \geq 10$  and width  $> 50$  cm:

$$SAE_C = 7.0 \times ps + 378$$

(ii) for household dishwashers with rated capacity  $ps \leq 9$  and household dishwashers with rated capacity  $9 < ps \leq 11$  and width  $\leq 50$  cm:

$$SAE_C = 25.2 \times ps + 126$$

where:

$ps$  = number of place settings.

## 2. CALCULATION OF THE DRYING EFFICIENCY INDEX

For the calculation of the Drying Efficiency Index ( $I_D$ ) of a household dishwasher model, the drying efficiency of the household dishwasher is compared to the drying efficiency of a reference dishwasher, where the reference dishwasher shall have the characteristics indicated in the generally recognised state-of-the-art measurement methods, including methods set out in documents the reference numbers of which have been published for that purpose in the Official Journal of the European Union.

(a) The Drying Efficiency Index ( $I_D$ ) is calculated as follows and rounded to two decimal places:

$$\ln I_D = \frac{1}{n} \times \sum_{i=1}^n \ln \left( \frac{D_{T,i}}{D_{R,i}} \right)$$

$$I_D = \exp(\ln I_D)$$

where:

$D_{T,i}$  = drying efficiency of the household dishwasher under test for one test cycle (i);

$D_{R,i}$  = drying efficiency of the reference dishwasher for one test cycle (i);

$n$  = number of test cycles,  $n \geq 5$ .

- (b) The drying efficiency ( $D$ ) is the average of the wet score of each load item after completion of a standard cleaning cycle. The wet score is calculated as shown in Table 1:

Table 1

Number of water traces ( $W_T$ ) or wet streak ( $W_S$ )	Total wet area ( $A_w$ ) in $\text{mm}^2$	Wet score
$W_T = 0$ and $W_S = 0$	Not applicable	2 (most efficient)
$1 < W_T \leq 2$ or $W_S = 1$	$A_w < 50$	1
$2 < W_T$ or $W_S = 2$ or $W_S = 1$ and $W_T = 1$	$A_w > 50$	0 (least efficient)

### 3. CALCULATION OF THE ANNUAL WATER CONSUMPTION

The annual water consumption ( $AW_C$ ) of a household dishwasher is calculated, in litres and rounded up to the nearest integer, as:

$$AW_C = W_t \times 280$$

where:

$W_t$  = water consumption for the standard cleaning cycle, in litres and rounded to one decimal place.