

Brussels, **XXX**
[...](2017) **XXX** draft

COMMISSION REGULATION (EU) .../...

of **XXX**

**implementing Directive 2009/125/EC of the European Parliament and of the Council
with regard to ecodesign requirements for household
dishwashers__repealing_Regulation (EU) No 1016/2010 with regard to ecodesign
requirements for household dishwashers_**

(Text with EEA relevance)

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission. The information transmitted is intended only for the Member State or entity to which it is addressed for discussions and may contain confidential and/or privileged material.

COMMISSION REGULATION (EU) .../...

of XXX

**implementing Directive 2009/125/EC of the European Parliament and of the Council
with regard to ecodesign requirements for household dishwashers**

**repealing
Regulation (EU) No 1016/2010 with regard to ecodesign requirements for household
dishwashers and amending Regulation (EC) No 1275/2008 with regard to ecodesign
requirements for standby and off mode electric power consumption of electrical and
electronic household and office equipment**

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products¹, and in particular Article 15(1) and Article 15(4)(a) thereof,

[After consulting the Ecodesign Consultation Forum referred to in Article 18 of Directive 2009/125/EC],

Whereas:

- (1) Under Directive 2009/125/EC ecodesign requirements should be set by the Commission for energy-related products representing significant volumes of sales and trade, having significant environmental impact and presenting significant potential for improvement in terms of their environmental impact without entailing excessive costs.
- (2) Article 15(4)(a) of Directive 2009/125/EC requires the Commission to consider the life cycle of the product and all its significant environmental aspects.
- (3) Article 16(2)(a) of Directive 2009/125/EC provides that in accordance with the procedure referred to in Article 19(3) and the criteria set out in Article 15(2), and after consulting the Consultation Forum, the Commission shall, as appropriate, introduce implementing measures for household appliances.
- (4) This regulation covers products designed for cleaning household dishware. The ecodesign requirements for household dishwashers were laid down in Regulation 1016/2010/EU implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household dishwashers².

¹ OJ L 285, 31.10.2009, p. 10.

² OJ L 293, 11.11.2010, p. 31

- (5) Regulation 1016/2010/EU was to be reviewed no later than 4 years after its entry into force.
- (6) The Commission has reviewed Regulation 1016/2010/EU in the light of technological progress. The review study has analysed the technical, environmental and economic aspects of household dishwashers as well as the real-life user behaviour. The study was developed in consultation with stakeholders and interested parties from the Union and third countries and the results were made publicly available and presented to the Consultation Forum established by Article 18 of Directive 2009/125/EC.
- (7) The study concluded that there was a need to revise the ecodesign requirements for household dishwashers, the requirements related to use of essential resources such as energy and water and also to introduce requirements related to resource efficiency and environment aspects such as reparability and recyclability.
- (8) Non-household dishwashers have distinct characteristics and uses. They are subject to other regulatory work and should therefore not be included in the scope of this Regulation.
- (9) The annual electricity consumption of household dishwashers subject to this Regulation was estimated to have been 30.6 TWh in the Union in 2015 corresponding to 11.1 million tonnes of CO_{2eq}. Unless specific measures are taken, annual electricity consumption is estimated to increase to 39.7 TWh in 2030. The review study shows that the electricity consumption of products subject to this Regulation can be cost-effectively reduced.
- (10) Considering the EU action plan on Circular Economy³ and given the importance of resource efficiency, the Regulation should also establish resource efficiency requirements as regards non-energy aspects. These requirements should apply in addition to other EU legislation applicable to household dishwashers, their materials and components, in particular Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS), Directive 2012/19/EU on waste electrical and electronic equipment (WEEE) and Regulation 517/2014/EU of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases.
- (11) Improvements of household dishwashers are achievable by applying existing non-proprietary, cost-effective technologies, in line with the provisions of the Directive 2009/125/EC.
- (12) The ecodesign requirements should not have any significant negative impact on health, safety and the environment. Furthermore, the requirements should not have any significant negative impact on the functionality of the products, on their affordability, on its life cycle costs or on industry's competitiveness nor impose on manufacturers' proprietary technology or excessive administrative burden.
- (13) The ecodesign requirements should be introduced gradually in order to provide sufficient time for manufacturers to redesign products subject to this Regulation. The timing should be set in such a way as to avoid negative impacts on the functionalities of equipment on the market, and to take into account cost impacts for end-users and manufacturers, in particular small and medium-sized enterprises, while ensuring timely achievement of the objectives of this Regulation.

³ Commission Communication „Closing the loop - An EU action plan for the Circular Economy“, COM(2015) 614 final, 2.12.2015

- (14) Measurements of the relevant product parameters should be performed using reliable, accurate and reproducible measurement methods, which take into account the recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation organisations, as listed in Annex I to Regulation (EU) 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation⁴.
- (15) In conformity with Article 8 of Directive 2009/125/EC, this Regulation should specify the applicable conformity assessment procedures.
- (16) In order to facilitate compliance checks, manufacturers should provide information in the technical documentation referred to in Annexes IV and V to Directive 2009/125/EC in so far as this information relates to the requirements laid down in this Regulation.
- (17) In addition to the legally binding requirements laid down in this Regulation, indicative benchmarks for best available technologies should be identified. This will help to ensure the wide availability and easy accessibility of information on the environmental performance of products subject to this Regulation, in particular for small and medium-sized enterprises, which will further facilitate the integration of best design technologies and the development of more energy-, water- and material efficient products.
- (18) [The measures provided for in this Regulation are in accordance with the opinion of the Committee referred to in Article 19(1) of Directive 2009/125/EC],

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter and scope

1. This Regulation establishes ecodesign requirements for the placing on the market of electric mains-operated household dishwashers and electric mains-operated household dishwashers that can also be powered by batteries, including built-in household dishwashers.
2. This regulation shall not apply to non-household dishwashers.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Directive 2009/125/EC, 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, which may or may not have a specific drying operation at the end of the programme and which is [designed for] [principally intended for] domestic use complying with the Low Voltage Directive 2014/35/EU as stated by the manufacturer in the Declaration of Conformity (DoC);

⁴ OJ L 316, 14.11.2012, p. 12

- (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;
- (3) 'non-household dishwasher' means a dishwasher used in an environment other than in an individual household or not complying with any other aspect of the definition of a household dishwasher;
- (4) 'place setting' means a defined set of crockery, glass and cutlery for use by one person;
- (5) 'rated capacity' means the maximum number of place settings together with the serving pieces, as stated by the manufacturer, which can be treated in a household dishwasher on the programme selected when loaded in accordance with the manufacturer's instructions;
- (6) 'programme' means a series of operations that are pre-defined and are declared as suitable by the manufacturer for specified levels of soil or types of load, or both, and together form a complete cycle;
- (7) 'programme time' means the time that elapses from the initiation of the programme until the completion of the programme, excluding any user-programmed delay;
- (8) 'cycle' means a complete cleaning, rinsing, and drying process, as defined for the selected programme;
- (9) 'delay start mode' means a condition where the household dishwasher automatically starts the cleaning cycle at a later time;
- (10) 'standby mode' is defined as in Regulation (EC) No 1275/2008;
- (11) 'network standby mode' is defined as in Regulation (EU) No 801/2013;
- (12) 'Off mode' is defined as, in accordance with Regulation (EC) No 1275/2008, a condition in which the household dishwasher is connected to the mains power source and is not providing any function;
- (13) '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 machine without any further intervention of the user;
- (14) 'equivalent household dishwasher' means a model of a household dishwasher placed on the market with the same rated capacity, technical and performance characteristics as regards generic and specific eco-design requirements, energy and water consumption and airborne acoustical noise emissions as another model of a household dishwasher placed on the market under a different commercial code number by the same manufacturer;
- (15) P_o (W) is the power consumption in off mode, expressed in Watt and rounded to two decimal places;
- (16) P_l (W) is the power consumption in left-on mode, expressed in Watt and rounded to two decimal places;
- (17) P_b (W) is the power consumption in any mode before the initiation of the cleaning programme, expressed in Watt and rounded to two decimal places;
- (18) P_n (W) is the power consumption in networked standby mode, expressed in Watt and rounded to two decimal places;
- (19) 'spare part' means a separate part that can replace a part with the same or similar function in an appliance. The part is considered necessary for use if the appliance cannot function as intended without that part. The functionality of the appliance is restored or is upgraded when the part is replaced by a spare part;

- (20) ‘independent operator’ means an undertaking other than authorised retailer and repairer which is directly or indirectly involved in the repair and maintenance of household dishwashers.

Article 3

Ecodesign requirements

1. The generic ecodesign requirements for household dishwashers are set out in point 1 of Annex I.
2. Additional generic ecodesign requirements for household dishwashers on repair and end-of-life aspects are set out in point 2 of Annex I.
3. The specific ecodesign requirements for household dishwashers are set out in point 2 of Annex I.
4. Compliance of household dishwashers with the applicable ecodesign requirements shall be measured in accordance with the methods set out in Annex II.

Article 4

Conformity assessment

1. The conformity assessment procedure referred to in Article 8 of Directive 2009/125/EC shall be the internal design control system set out in Annex IV to that Directive or the management system for assessing conformity set out in Annex V to that Directive.
2. For the purposes of conformity assessment pursuant to Article 8 of Directive 2009/125/EC, the technical documentation file shall contain the results of the calculation set out in Annex II to this Regulation.

Where the information included in the technical documentation 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 technical documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by manufacturers to verify the accuracy of the calculations undertaken. In such cases, the technical documentation shall also include a list of all other equivalent household dishwasher models where the information included in the technical documentation was obtained on the same basis.

Article 5

Circumvention

The manufacturer or importer shall not place on the market products that have been designed so that a model’s performance is automatically altered in test conditions with the objective of reaching a more favourable level for any of the parameters declared by the manufacturer in the technical documentation or included in any of the documentation provided with the product.

Where applicable, the power consumption of the product shall not increase after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user.

Article 6

Verification procedure for market surveillance purposes

Market surveillance shall be carried out in accordance with the rules specified in Directive 2009/125/EC.

Assessment of household dishwashers for compliance with the applicable ecodesign requirements set out in Annex I to this Regulation shall be carried out in accordance with the verification procedure set out in Annex III to this Regulation.

Article 7

Benchmarks

The indicative benchmarks for best-performing household dishwashers available on the market are set out in Annex IV.

Article 8

Revision

The Commission shall review this Regulation in the light of technological progress and present the result of this review to the Ecodesign Consultation Forum no later than 5 years after its entry into force.

The review shall in particular assess if the improvement potential with regard to energy and environmental performance of household dishwashers has been fully exploited in view of technological progress. Furthermore, the review shall assess if further requirements on material efficiency, including reparability, durability, upgradability and recyclability or the identification of certain materials and substances of household dishwashers can be established.

Article 9

Repeal

Regulation 1016/2010 is repealed as of the day of entry into force of this Regulation, except for Articles 3 and 5 thereof and Annexes I to III thereto that shall apply until this Regulation starts to apply.

Article 10

Amendment to Regulation (EC) No 1275/2008

Annex I, point 1 to Regulation (EC) No 1275/2008 is replaced by the text set out in Annex V to this Regulation.

Article 11

Entry into force and application

1. This Regulation shall enter into force on the 20th day following its publication in the Official Journal of the European Union.

2. The ecodesign requirements listed in points 1, 2 and 3 of Annex I shall apply from [1 December 2020].

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

Done at Brussels,

For the Commission
Jean-Claude JUNCKER
The President

DRAFT

DRAFT ANNEXES

OF

COMMISSION REGULATION (EU) .../...

**implementing Directive 2009/125/EC of the European Parliament and of the Council
with regard to ecodesign requirements for household dishwashers**

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ANNEX I

Ecodesign requirements

1. GENERIC ECODESIGN REQUIREMENTS

From [1 December 2020],

- (1) For the calculation of the energy consumption and other parameters for household dishwashers, the cycle which cleans normally soiled tableware shall be used (hereafter ECO cycle). This cycle shall be clearly identifiable on the programme selection device of the household dishwasher or the household dishwasher display or the network-connected application, if any, and named 'ECO' and shall be set as the default cycle for household dishwashers equipped with automatic programme selection or any function for automatically selecting a cleaning programme or maintaining the selection of a programme. The name 'ECO' shall be used once and exclusively for this programme. The only other additional information which could be combined with the term 'ECO' is temperature.
- (2) Other programme names that could divert the user from using the ECO cycle for normally soiled tableware shall not be used. Therefore, programme names such as 'normal', 'daily' or 'standard' shall not be used on the machine.
- (3) The booklet of instructions provided by the manufacturer shall provide:
 - (a) Information that the standard cleaning cycle referred to as 'ECO' is suitable to clean normally soiled tableware and that it is the most efficient programme in terms of its combined energy and water consumption for that type of tableware;
 - (b) information that loading the machine up to the capacity indicated by the manufacturer will contribute to energy and water savings;
 - (c) indicative information on the programme time, energy and water consumption for the main cleaning programmes;
 - (d) information that manual pre-rinsing of dishware items leads to increased water and energy consumption and is not needed to achieve the minimum cleaning performance;
 - (e) information that automatic dishwashing usually consumes less energy and water than hand dishwashing when the dishwasher is used according to the booklet of instructions;
 - (f) Information on the power consumption of the low-power modes (left-on mode, off mode, network mode and any mode before the initiation of the dishwashing cycle).
- (4) Moreover, the booklet of instructions shall contain instructions for the user to perform maintenance operations for the purpose of ensuring durability and repair, in addition to any instructions automatically delivered by the appliance when equipped with this feature. Such maintenance instructions shall as a minimum include instructions for:

- (a) correct installation (including level positioning, connection to mains, connection to hot or cold water inlets);
- (b) correct and incorrect loading of dishware;
- (c) correct dosage of detergent, salt and other additives, and consequences of inadequate dosage;
- (d) energy and water saving, including programme and sub-programme option selection;
- (e) foreign object removal from the appliance;
- (f) periodical cleaning, including optimal frequency, and procedure;
- (g) door opening between cycles, if applicable;
- (h) periodical checks of filters, including optimal frequency, and procedure;
- (i) identification of errors, the meaning of the errors, and the action required, including identification of errors requiring professional assistance;
- (j) access to professional repair (internet webpages, addresses, contact details);
- (k) implications of self-repair or non-professional repair for the legal guarantee, and when applicable, also to the commercial guarantee;
- (l) Information on the period during which or the date until which the spare parts necessary for the use of the household dishwasher are available.

The requirements under (3) and (4) above are without prejudice that at the point of sale, further information may be added complementing the information contained in the booklet.

2. ADDITIONAL GENERIC ECODESIGN REQUIREMENTS ON REPAIR AND END-OF-LIFE ASPECTS

From [1 December 2020], household dishwashers shall be provided with the following information

(1) Information requirements for refrigeration gases

Manufacturers of household dishwashers equipped with a heat pump shall mark clearly in the back panel of the appliances the chemical name of the principal component of the refrigerant gas used.

(2) Requirements for dismantling for the purpose of avoiding pollution, and for material recovery and recycling of the household dishwasher

Manufacturers shall ensure that household dishwashers are designed so that the access to and the extraction of the following components (when present) must be possible without proprietary and not commonly available tools:

- Printed circuit boards (larger than 10 cm²);
- Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume).
- Liquid crystal displays (larger than 100 cm²);
- Batteries;

- Heat pumps.

Accessing components shall be facilitated by documenting the sequence of dismantling operations needed to access the targeted components, including for each of these operations, the type and the number of fastening techniques(s) to be unlocked, and tool(s) required.

(3) Spare part availability

Information issued by the manufacturer or importer of household dishwashers to the retailer, on the period during which or the date until which the spare parts necessary for the repair of the appliance are available, shall be shown on any commercial document accompanying the sale of the appliance. The minimum period during which the spare parts for household dishwashers are available shall be seven years, counting from the production date of the machine.

Such information shall be disclosed to the consumer by the retailer, visibly and legibly, before concluding the sale, in the booklet of instructions, as stated in point 1(4) of this Annex.

(4) Spare part maximum delivery time

Until the date or during the period declared in application of point 3 of this Annex, the manufacturer or importer shall supply the spare parts necessary for the repair of the household dishwasher within three weeks to retailers, to repairers, or directly to consumers.

(5) Access to Repair and Maintenance Information

1. Manufacturers' obligations

Manufacturers shall provide unrestricted access to appliance repair and maintenance information to independent operators through websites or other easily accessible means of information using a standardised format for requesting and accessing the information, in a manner which is non-discriminatory compared to the provision given or access granted to authorised retailers and repairers. With a view to facilitating the achievement of this objective, the information shall be provided consistently and continuously.

The appliance repair and maintenance information referred to in the previous paragraph shall include:

- (a) an unequivocal appliance identification;
- (b) a disassembly map and exploded view;
- (c) technical manuals;
- (d) component and diagnosis information (such as minimum and maximum theoretical values for measurements);
- (e) wiring and connection diagrams;
- (f) diagnostic trouble codes (including manufacturer specific codes);
- (g) information concerning, and delivered by means of, proprietary tools and equipment; and

(h) data record information.

Authorised retailers or repairers within the distribution system of a given appliance manufacturer shall be regarded as independent operators for the purposes of this Regulation to the extent that they provide repair or maintenance services for appliances in respect of which they are not members of the appliance manufacturer's distribution system.

The information on diagnostic tools, repair and test equipment necessary for the appliance repair shall be provided by the manufacturer or importer on a non-discriminatory basis to any repairer and for any requested component, diagnostic tools or test equipment.

2. Fees for access to appliance repair and maintenance information

Manufacturers may charge reasonable and proportionate fees for access to household dishwasher's repair and maintenance information covered under point 5(1). A fee is not reasonable or proportionate if it discourages access by failing to take into account the extent to which the independent operator uses it.

Manufacturers shall make available appliance repair and maintenance information on a daily, monthly, and yearly basis, with fees for access to such information that may vary in accordance with the respective periods of time for which access is granted.

3. SPECIFIC ECODESIGN REQUIREMENTS

Household dishwashers shall comply with the following requirements:

From [1 December 2020]:

- (a) the Energy Efficiency Index (EEI) shall be less than 58, except for household dishwashers with a rated capacity equal to or less than 7 place settings;
- (b) the Energy Efficiency Index (EEI) shall be less than 63 for household dishwashers with a rated capacity equal to or less than 7 place settings;
- (c) the Cleaning Efficiency Index (I_C) shall be greater than 1.12;
- (d) the Drying Efficiency Index (I_D) shall be greater than 1.08;
- (e) the power consumption of the 'left-on mode' or any other condition after any programme shall not exceed 1.00W;
- (f) the duration of the 'left-on mode' after the end of any programme shall not exceed 20 minutes after which the power management function is switching the machine automatically to off-mode;
- (g) the power consumption of the 'off mode' shall not exceed 0.50W;
- (h) the power consumption of any mode before the initiation of the cleaning programme, including the delay start mode, shall not exceed 2.00 W.

The Energy Efficiency Index (EEI), the Cleaning Efficiency Index (I_C) and the Drying Efficiency Index (I_D) of household dishwashers are calculated in accordance with Annex II.

ANNEX II

Measurements

1. CALCULATION OF THE ENERGY EFFICIENCY INDEX

For the calculation of the Energy Efficiency Index (EEI) of a household dishwasher model, the ECO Cycle Energy Consumption (CEC) of the household dishwasher is compared to its Standard Cycle Energy Consumption (SCEC).

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

$$EEI = \frac{CEC}{SCEC} \times 100$$

CEC = ECO Cycle Energy Consumption of the household dishwasher;

SCEC = Standard Cycle Energy Consumption of the household dishwasher.

- (b) The Standard Cycle Energy Consumption (SCEC) is calculated in kWh/cycle as follows:

- (i) for household dishwashers with rated capacity $ps \geq 11$:

$$SCEC = 0.025 \times ps + 1.350$$

- (ii) for household dishwashers with rated capacity $ps \leq 10$:

$$SCEC = 0.090 \times ps + 0.450$$

where:

ps = number of place settings

2. CALCULATION OF THE CLEANING EFFICIENCY INDEX

For the calculation of the Cleaning Efficiency Index (I_C) of a household dishwasher model, the cleaning efficiency of the household dishwasher is compared to the cleaning 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 Cleaning Efficiency Index (I_C) is calculated as follows and rounded to two decimal places:

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

where:

$C_{T,i}$ = cleaning efficiency of the household dishwasher under test for one test cycle (i)

$C_{R,i}$ = cleaning efficiency of the reference dishwasher for one test cycle (i)

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

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

Table 1

Number of small dot-shaped soil particles (n)	Total soiled area (A_S) in mm^2	Soil score
n = 0	$A_S = 0$	5 (most efficient)
$0 < n \leq 4$	$0 < A_S \leq 4$	4
$4 < n \leq 10$	$0 < A_S \leq 4$	3
$10 < n$	$4 < A_S \leq 50$	2
Not applicable	$50 < A_S \leq 200$	1
Not applicable	$200 < A_S$	0 (least efficient)

3. 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:

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

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 2:

Table 2

Number of water traces (W_T) or wet streak (W_S)	Total wet area (A_w) in 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)

ANNEX III

Product compliance verification by market surveillance authorities

The verification tolerances defined in this Annex relate only to the verification of the measured parameters by Member State authorities and shall not be used by the manufacturer or importer as an allowed tolerance to establish the values in the technical documentation or in interpreting these values with a view to achieving compliance or to communicate better performance by any means.

When verifying the compliance of a product model with the requirements laid down in this Regulation pursuant to Article 3(2) of Directive 2009/125/EC, for the requirements referred to in this Annex, the authorities of the Member States shall apply the following procedure:

- (1) The Member State authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to point 2 of Annex IV to Directive 2009/125/EC (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the manufacturer or importer than the results of the corresponding measurements carried out pursuant to paragraph (g) thereof; and
 - (b) the declared values meet any requirements laid down in this Regulation, and any required product information published by the manufacturer or importer does not contain values that are more favourable for the manufacturer or importer than the declared values; and
 - (c) when the Member State authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in point 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household dishwasher models in the manufacturer's or importer's technical documentation shall be considered not to comply with this Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Member State authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the manufacturer's or importer's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if, for these three units, the arithmetical mean of the determined values complies with the respective verification tolerances given in Table 1.
- (6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household dishwasher models in the manufacturer's or importer's technical documentation shall be considered not to comply with this Regulation.
- (7) The Member State authorities shall provide all relevant information to the authorities of the other Member States and to the Commission without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

Member States' authorities shall use measurement procedures which take into account the generally recognised, state-of-the-art, reliable, accurate and reproducible measurement

methods, including methods set out in documents whose reference numbers have been published for that purpose in the Official Journal of the European Union. The Member State authorities shall use the measurement and calculation methods set out in Annex II.

The Member State authorities shall only apply the verification tolerances that are set out in Table 1 and shall use only the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 3

Measured parameter	Verification tolerances
ECO cycle energy consumption (CEC)	The determined value shall not exceed the declared value of CEC by more than 5 %. Where three additional units need to be selected, the arithmetic mean of the determined values of these three units shall not exceed the declared value of CEC by more than 5 %.
Cleaning efficiency index (I_C)	The determined value shall not be less than the declared value of I_C by more than 14 %.
Drying efficiency index (I_D)	The determined value shall not be less than the declared value of I_D by more than 10 %.
Power consumption in off mode and left-on mode (P_o and P_l)	The determined values of power consumption P_o and P_l of more than 0.50 W shall not exceed the declared values of P_o and P_l by more than 10 %. The determined values of power consumption P_o and P_l of less than or equal to 0.50 W shall not exceed the declared values of P_o and P_l by more than 0.05 W.
Power consumption in modes before the initiation of the cleaning programme (P_b)	The determined values of power consumption P_b of more than 1W shall not exceed the declared values of P_b by more than 10%. The determined values of power consumption P_b of less than or equal to 1 W shall not exceed the declared values of P_b by more than 0.10W
Power consumption in networked-standby mode (P_n)	The determined values of power consumption P_n of more than 2W shall not exceed the declared values of P_n by more than 10%. The determined values of power consumption P_n of less than or equal to 2 W shall not exceed the declared values of P_n by more than 0.20W
Duration of left-on mode (T_l)	The determined value shall not exceed the declared value of T_l by more than 10 %.

ANNEX IV

Indicative benchmarks

1. INDICATIVE BENCHMARKS FOR HOUSEHOLD DISWASHERS ON WATER AND ENERGY CONSUMPTION, AIRBORNE ACOUSTICAL NOISE EMISSIONS AND PROGRAMME TIME

At the time of entry into force of this Regulation, the best available technology on the market for household dishwashers in terms of their energy efficiency, energy and water consumption, cleaning and drying efficiency and airborne acoustical noise emissions for the ECO cycle is identified as follows:

(1) Household dishwashers with 14 place settings (without heat pump technology):

- (a) energy consumption: 0.67 kWh/cycle;
- (b) water consumption: 9.9 litres/cycle;
- (c) airborne acoustical noise emissions: 44 dB(A);
- (d) programme time: 222 minutes (3 hours and 42 minutes).

(2) Household dishwashers with 13 place settings (with heat pump technology):

- (a) energy consumption: 0.55 kWh/cycle;
- (b) water consumption: 8.8 litres/cycle;
- (c) airborne acoustical noise emissions: 44 dB(A);
- (d) programme time: 295 minutes (4 hours and 55 minutes).

(3) Household dishwashers with 10 place settings:

- (a) energy consumption: 0.66 kWh/cycle;
- (b) water consumption: 9.5 litres/cycle;
- (c) airborne acoustical noise emissions: 44dB(A);
- (d) programme time: 195 minutes (3 hours and 15 minutes).

(4) Household dishwashers with 6 place settings:

- (a) energy consumption: 0.62 kWh/cycle;
- (b) water consumption: 8.0 litres/cycle;
- (c) airborne acoustical noise emissions: 48dB(A);
- (d) programme time: 225 minutes (3 hours and 45 minutes).

2. INDICATIVE BENCHMARKS FOR HOUSEHOLD DISWASHERS ON SPARE PARTS AVAILABILITY AND DELIVERABLE TIME OF SPARE PARTS

At the time of entry into force of this Regulation, the fastest delivery times of spare parts for household dishwasher are between 7 and 10 days. The longest availability of spare parts necessary for the use of the household dishwasher is around 10 years.

ANNEX V

List of energy-using products covered by Annex I, point 1 to Regulation (EC) No 1275/2008

1. Household appliances

Washing machines

Clothes dryers

Cooking:

Electric ovens

Electric hot plates

Microwave ovens

Toasters

Fryers

Grinders, coffee machines and equipment for opening or sealing containers or packages

Electric knives

Other appliances for cooking and other processing of food, cleaning, and maintenance of clothes

Appliances for hair cutting, hair drying, tooth brushing, shaving, massage and other body care appliances

Scales

Brussels, **XXX**
[...](2017) **XXX** draft

COMMISSION DELEGATED REGULATION (EU) .../...

of **XXX**

**supplementing Regulation (EU) 2017/1369 of the European Parliament and of the
Council with regard to energy labelling of household
dishwashers__repealing_Regulation (EU) No 1059/2010 with regard to energy labelling
of household dishwashers_**

(Text with EEA relevance)

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission. The information transmitted is intended only for the Member State or entity to which it is addressed for discussions and may contain confidential and/or privileged material.

EXPLANATORY MEMORANDUM

1. CONTEXT OF THE DELEGATED ACT

Grounds for and objectives of the proposal

The Energy Labelling Framework Regulation (EU) 2017/1369¹ establishes a framework for the provision of accurate, relevant and comparable information on the specific energy consumption of energy-related products and other environmental information, and facilitates the customer's choice in favour of products that are more resource efficient.

It is a key instrument of the Union policy for improving the energy and other environmental aspects of products placed on the market or put into service in the European Economic Area (EEA). It is an important instrument for achieving the energy savings objectives for 2020 and 2030, and its implementation is one of the priorities in the commission's Communication on Energy 2020 and Energy Efficiency Plan 2011, being reinforced by the current Ecodesign Working Plan 2016-2019. It is also expected to contribute significantly to the transition towards a more circular economy, as expressed in the Circular Economy action plan 2015². Furthermore, the implementation of the Regulation (EU) No 2017/1369 will contribute to the EU's target of reducing greenhouse gases by at least 20% by 2020 and by 40% by 2030.

Regulation (EU) 1059/2010 sets energy labelling requirements for household dishwashers. The revision clause (Article 7) states that by December 2014 the Commission should revise the regulation in the light of the technological development and in particular assess the verification tolerances set in Annex V.

Dishwashers were included as one of the priority products for revision in the Ecodesign Working Plan 2016-2019. Dishwashers are also among the product groups mentioned in Article 11(5)(b) of Regulation (EU) 2017/1369 for which the Commission should adopt a delegated act to introduce an A to G rescaled label by 2 November 2018. The rescaling exercise will result in the existing range of energy classes of A+++ to G being replaced by a range of A to G.

In accordance with Article 11(8) of Regulation (EU) 2017/1369, no products are expected to fall into energy class A when the rescaled label is introduced, and the estimated time within which a majority of models will fall into that class is at least 10 years.

In order to revise both the Ecodesign and Energy Label regulations, a review study³ was launched in 2014, resulting in a final report published in June 2017. The study included a stakeholder survey, two stakeholder meetings in 2015 and a web-seminar in 2016. It involved approximately 140 stakeholders .

General context

Household dishwashers are widely used in the European Union. It is estimated that on average 44% of the European households are equipped with a household dishwasher (96 million units). The electricity consumption of the dishwashers was estimated at around 31 TWh/year in 2015 and 317 million m³ of water. Unless new measures specifically relating to these

¹ Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU (OJ L 198, 28.7.2017, p. 1).

² Closing the loop - An EU action plan for the Circular Economy". COM(2015) 614 final, Brussels, 2.12.2015

³ Ecodesign and energy label preparatory study on Dishwashers, available at: <http://susproc.jrc.ec.europa.eu/Dishwashers/documents.html>

products are introduced, the total electricity consumption of dishwashers in the EU is expected to reach around 40 TWh/year by 2030, equivalent to around 15 million ton CO_{2eq}.

The energy consumption and emissions related to the usage of dishwashers can be reduced below the level they would reach in a business-as-usual scenario in a cost-effective way.

The main reasons for not realising these saving potentials are the failure of the market to:

- (i) provide a better fit between the standard programme used for testing (optimised by the manufacturers) and the other cleaning programmes actually used by consumers;
- (ii) guide consumers to make informed purchase decisions based on the life cycle cost rather than the purchase cost (asymmetric information) and
- (iii) the lack of incentives for repairing the appliances and for managing properly the products at the end of their use phase.

Potential cost-effective improvements that would benefit the end-user are therefore often not realised.

The objective of the revision of Regulation 1059/2010 on energy labelling for dishwashers is to trigger a change in market conditions and appliances optimisation, without damaging the increasing penetration rate of dishwashers into the EU market experienced during the last years. The aim is also to rescale the label in accordance with Regulation (EU) 2017/1369.

The proposed revision is expected to reduce the total energy consumption of these products each year across the EU, compared to a business-as-usual scenario, by around 1.1 TWh/year, 0.4 Mt CO₂ eq/year and up to 12 million m³/year by 2030. It is also expected to facilitate repair activities and end-of-life treatment by ensuring that the necessary information and spare parts are available. This may be complemented in future by a reparability scoring, which is currently under study.

Existing regulation and standards in EU and third countries

The Energy Labelling Framework Regulation 2017/1369 is an important instrument for achieving the European targets on energy efficiency and the implementation of this working document is a concrete contribution to this process.

Additionally, other ecodesign regulations are of relevance for dishwashers such as the standby and off mode regulation 1275/2008, the ecodesign regulation 801/2013 on networked standby or the low voltage directive 201/35/EC and the electromagnetic compatibility directive 2014/30/EC.

Regarding the legislation set in third countries, many economies around the world (e.g. US, Japan, Australia, China, Brazil or Mexico) have introduced in recent years legislation on these products. The US Department of Energy introduced in 2012 a final rule prescribing the energy conservation standards for dishwashers manufactured on or after 30/05/ 2013; additionally, standard dishwashers may be awarded the Energy Star Label. The revision of this label is foreseen to come into force from 2019 and will include thresholds for slim dishwashers too.

The performance of dishwashers is tested in accordance with standard EN 50242 / EN 60436. Currently, CENELEC is working on the adaptation of the existing measurement standards to fill a number of gaps concerning the identified level of performance between the real washing programme used by consumers and the currently standardised test. This adaptation includes the adoption of a new test load with a higher variety of shapes and materials, the combined assessment procedure for combined cleaning and drying performance, the new reference detergent, test procedures for automatic programmes and the rinsing performance.

The adaptation of the standard is in an advanced stage of development and very likely to be in place by the time of the adoption of the energy labelling delegated act.

2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT

Consultation of interested parties

Methods used, main sectors targeted and general profile of respondents

The Commission consulted interested parties from within and outside the EU, and Member States' experts from the very beginning of the review study for this Regulation. The proposed working documents (energy labelling and ecodesign) are to be discussed in the Ecodesign and Energy Label Consultation Forum set up under Directive 2009/125/EC and Regulation 2017/1369. The Consultation Forum comprises Member States' experts and a balanced representation of interested parties, namely manufacturers, retailers, environmental NGOs and consumer organisations. The Commission will present two working documents proposing the changes to the ecodesign requirements and the energy label for household dishwashers at the Consultation Forum meeting of 22nd November 2017.

All relevant working documents were circulated to the Member States, the European Parliament and interested parties. The working documents for the Consultation Forum will be published in the Commission's CIRCA system, together with comments received in writing from interested parties during the preparatory review. Commission staff also discussed the initiative bilaterally with various interested parties and Member States. The World Trade Organisation was notified of the draft Regulation on *[insert date]*, to ensure that no barriers to trade (prohibited under the Technical Barriers to Trade Agreement) would be introduced.

Collection and use of expertise

Relevant scientific fields

Internal and external expertise was mainly gathered through the review study, which was designed to provide technical, environmental and economic analysis.

Methodology used

The technical, environmental and economic analysis of the study followed the structure recommended in the *Methodology for Ecodesign of Energy-related Products*⁴.

Main organisations and experts consulted

The review study was conducted as an open process, with input from interested parties including individual manufacturers, associations of manufacturers, repairers and waste managers, representatives of the national bodies, environmental NGOs and consumer organisations and experts.

Publication of the expert advice

Interim results of the review study and further relevant material were published regularly on the website⁵ created for the study in order that interested parties could consult this information and provide their input promptly. Additionally, all registered stakeholders were invited to provide comments on the published study throughout an information exchange information platform (BATIS).

⁴ http://ec.europa.eu/growth/industry/sustainability/ecodesign_en

⁵ <http://susproc.jrc.ec.europa.eu/Dishwashers/documents.html>

Interested parties were invited to consultation meetings held in June 2015, in November 2015 and in October 2016 to discuss the preliminary results. The written contributions received during the consultation process [and the minutes of the Consultation Forum] meeting are available on the Commission's CIRCA portal.

The review study made a number of recommendations as to the ecodesign and energy label requirements that could be introduced or modified for dishwashers. These were based on the technical, market and economic analysis carried out. The Commission used these recommendations, together with the most recent data available from the industry, as the basis for the proposed revised eco-design and energy label requirements. [The views expressed by the members of the Consultation Forum were addressed during the impact assessment.]

The main results of the review study are the following:

- Energy label classes: some dishwasher models already exceed the highest current energy efficiency class A+++, especially appliances with larger rated capacity and heat pump equipped dishwashers. A rescaling of the energy labelling classes should therefore simplify comparisons for consumers and provide an incentive to manufacturers to continue improving their appliances.
- Water consumption: the water consumption of household dishwashers per cycle and place setting is closely related to the energy consumption and has been reduced significantly during the past years. On the other hand, the consumer survey shows that a large share of households still usually pre-rinse each item, or at least pots, pans and casseroles under the tap which additionally consumes water (and energy, if hot water is used).
- Use of the standard programme: the standard cleaning programme that is used for testing the energy performance of the appliance is used in practice by consumers only to a minor extent (19%) according to the consumer survey. More often, the normal/regular programmes are used (39% altogether) which consume more energy and water than the standard programme. It has to be noted however that the standard (Eco) programme is used more often since the introduction of an obligation in 2012 to clearly mark this programme on the machine and to set it by default. The increased use of the standard (Eco) programme among the consumers underpins the continuation of the selection of this programme for measurement purposes. Moreover, certain aspects of the standard are currently under revision to better reflect the real-life use of dishwashers.
- Programme duration: the standard cleaning programme, whose consumption value is displayed on the energy label and thus influences the purchase decisions of consumers, is designed to improve the energy efficiency, often with the consequence of reducing the cleaning temperature and prolonging the programme duration. This consequence is in contradiction with the usual preference of consumers: the 2015 user survey indicates that the most consumers accept a maximum of 2 to 3 hours whereas there is clear reluctance to use longer programmes (beyond 3 hours). On the other hand, it is observed that the use of the standard (Eco) programme increased recently even though its duration has been stabilised at around 3.5 hours.
- Technical innovation: the results from the review study show that further energy savings could be achieved by technical improvements in fans, automatic door opening, improved sensors, heat exchangers or consumer feedback mechanisms. These options barely influence the life cycle cost. The use of heat pumps leads to energy savings but these do not make up for the initial investment cost over the lifetime of the appliance because consumers often chose other programmes for which the heat-pump does not contribute much to energy savings.

- Resource efficiency: statistics point to an increased proportion of household dishwashers which have to be replaced earlier than the expected average lifetime, especially within the first five years due to a defect. Early device defects may be due in part to inadequate consumer behaviour.

The main result of the review study regarding the particular aspect mentioned in Article 7 of Regulation 1059/2010 is the following:

- Verification tolerances: The revision of the standard for testing the performance of dishwashers includes a round-robin test (also called ring test). The analysis of the round robin test results allowed for a better understanding of the repeatability and reproducibility of the relevant measurement and new thresholds are proposed accordingly.

[In order to assess different policy options that could address the points highlighted above, several scenarios were created. In addition to the ‘business-as-usual’ case (i.e. not introducing any change other than the re-scaling of the energy classes), options include keeping the energy label only and implementing eco-design and rescaling the energy labelling with different stringencies (three scenarios were analysed).

Based on an assessment of the costs and benefits of the three options, the scenario that combines ecodesign requirements with a medium strictness regarding the rescaling of the energy label for dishwashers was chosen as the preferred option.

This option would result in lower overall energy consumption, water consumption and related emissions at no excessive lifecycle costs, as well as material efficiency requirements, which were analysed in parallel in consultation with experts and interested parties.] Implementation of the requirements proposed in the working documents would result in around 1.1 TWh electricity, 0.4 Mt CO₂ eq/year and 12 million m³ of water savings.

The aim of the measures is to address the market failures that have led to the sub-optimal design and low use of dishwasher programmes with improved environmental performance. The measures taken should not discourage the increasing penetration rate of dishwashers into the EU market, which has an overall beneficial effect on energy and water savings. The chosen option best fulfils the requirements of the Ecodesign Directive and those of the revised energy labelling framework Regulation.

The proposed [delegated act] on energy label requirements will have the following results:

- realising the potential for cost-effective improvements of the energy efficiency of dishwashers;
- reducing the use-phase energy consumption and emissions from dishwashers thus reducing the overall effect that these products have on the environment;
- reducing the combined cost of purchase and use for the consumer: consumers may have to pay more for the dishwashers, but they will save on energy costs, resulting in a pay-back time shorter than the lifetime of the product;
- creating a clear legal framework that ensures fair competition;
- improving the competitiveness of industry;
- benefiting employment in the EU;
- harmonising EU requirements for the placing on the market of dishwashers relating to energy efficiency and emissions, thus ensuring the lowest possible administrative burden and cost for businesses;

- avoiding, as far as possible, creating a disproportionate burden or additional costs for manufacturers, by providing for transitional periods that take into account redesign cycles, the pace of innovation and the return on investment.

3. LEGAL ELEMENTS OF THE DELEGATED ACT

3.1. Summary of the proposed action for Energy Label Regulation

1. Definition of the scope of the proposed Regulations

The working document establishes energy label requirements for the placing on the market of electric mains-operated household dishwashers, and electric mains-operated household dishwashers that can also be powered by batteries, including built-in household dishwashers.

2. Information on the label

The proposed Regulation includes the following changes:

- (1) Rescaled label introducing A to G classes in accordance with Regulation 2017/1369;
- (2) Weighted energy consumption (E_c) in kWh per cycle;
- (3) Weighted water consumption (W_c) in liters per cycle;
- (4) Time programme in hh:mm;
- (5) Airborne acoustic noise emission classes;
- (6) Clear indication that the values refer to only the ECO programme.

3.2. Measurements and calculations

Measurements and calculations of the relevant product parameters should be performed using methods that are reliable, accurate and reproducible. Manufacturers may apply the measurement and calculation methods and harmonised standards established in accordance with Article 13 of Regulation (EU) 2017/1369 as soon as they are made available and their references are published for that purpose in the *Official Journal of the European Union*. These methods are developed specifically so as to be reliable, accurate and reproducible. Requirements for calculation and measurement methods are laid down in Annex VII of the working document for the energy label regulation.

CENELEC should adapt the existing measurement standards that would provide proper measurement methods for all household dishwashers covered by the scope of the proposed measure.

3.5. Verification procedure for market surveillance purposes

When performing the market surveillance checks referred to in Article 8 of Regulation (EU) 2017/1369, the authorities of the Member States shall apply the verification procedure for the requirements set out in Annex IX of the revised EU Energy label regulation for household dishwashers.

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Member States authorities and shall not be used by the manufacturer or importer as an allowed tolerance to establish the values in the technical documentation

3.6. Date for evaluation and possible revision

The revised Regulation is to be reviewed no later than five years after its entry into force.

The main issues for a possible revision are:

- energy and water consumption;
- changes in the user behaviour increasing the use of most-efficient programmes;
- assessing if further requirements on increasing material efficiency and durability of the products, including a possible scoring on reparability, can be applied.

DRAFT

COMMISSION DELEGATED REGULATION (EU) .../...

of XXX

supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of household dishwashers

**repealing
Regulation (EU) No 1059/2010 with regard to energy labelling of household dishwashers**

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling⁶ and repealing Directive 2010/30/EU and in particular Articles 11 and 16 thereof,

Whereas:

- (1) Regulation (EU) 2017/1369 empowers the Commission to adopt delegated acts as regards the labelling or rescaling of the labelling of products groups representing significant potential for energy savings and, where relevant, other resources.
- (2) Provisions on the energy labelling of household dishwashers were established by Commission Delegated Regulation (EU) No 1059/2010 of 28 September 2010 supplementing Directive 2010/30/EU⁷.
- (3) Dishwashers are among the product groups mentioned in Article 11(5)(b) of Regulation (EU) 2017/1369 for which the Commission should adopt a delegated act to introduce an A to G rescaled label.
- (4) Regulation 1059/2010/EU contains a review clause in Article 7 requiring the Commission to review the regulation in the light of technological progress.
- (5) The Commission has reviewed Regulation 1059/2010/EU and analysed technical, environmental and economic aspects of household dishwashers as well as the real-life user behaviour. The review was undertaken in close cooperation with stakeholders and interested parties from the Union and third countries. The results of the review were made public and presented to the Consultation Forum established by Article 14 of Regulation (EU) 2017/1369.

⁶ OJ L 198, 28.07.2017, p.1.

⁷ OJ L 314, 30.11.2010, p. 1.

- (6) The review concluded that there was a need for the introduction of revised energy labelling requirements for household dishwashers.
- (7) Non-household dishwashers have distinct characteristics and uses and should therefore be exempted for the scope of this regulation.
- (8) The main environmental aspects of household dishwashers, identified as significant for the purposes of this Regulation, are energy and water consumption in the use phase.
- (9) The review has shown that the electricity and water consumption of products subject to this Regulation can be further reduced by implementing energy label measures to ensure the dynamic incentives for suppliers to further improve the energy and environmental efficiency of the household dishwashers and to accelerate the market transformation towards more efficient technologies.
- (10) [The Commission has consulted the experts designated by each Member State in the Committee established by Article 18 of Regulation (EU) 2017/1369 and in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making.]
- (11) Regulation 1059/2010 should be repealed and new provisions should be laid down by this Regulation.

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter and scope

1. 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 household dishwashers that can also be powered by batteries, including built-in household dishwashers.
2. This Regulation shall not apply to non-household dishwashers.

Article 2

Definitions

In addition to the definitions laid down in Article 2 of Regulation (EU) 2017/1369 and the definitions laid down in Annex I of this Regulation, 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, which may or may not have a specific drying operation at the end of the programme and which is designed in a way principally intended for domestic use complying with the Low Voltage Directive 2014/35/EU as stated by the manufacturer in the Declaration of Conformity (DoC);
- (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;

- (3) 'non-household dishwasher' means a dishwasher used in an environment other than in an individual household or not complying with any other aspect of the definition of a household dishwasher;
- (4) '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;
- (5) 'cycle' means a complete cleaning, rinsing, and drying process, as defined for the selected programme;
- (6) 'point of sale' means a location where household dishwashers are displayed or offered for sale, hire or hire-purchase.

Article 3

Obligations of suppliers

1. In addition to the obligations of suppliers laid down in Regulation (EU) 2017/1369, suppliers shall ensure that:
 - (a) each household dishwasher is supplied with a printed label in the format as set out in Annex IV;
 - (b) the parameters of the product information sheet, as set out in Annex V, are entered into the product database;
 - (c) if requested by the dealer, the product information sheet shall be made available in printed form;
 - (d) the content of the technical documentation uploaded into the product database is according to Annex VI;
 - (e) any visual advertisement for a specific model of household dishwasher contains the energy efficiency class and the range of efficiency classes available on the label in accordance with Annex X;
 - (f) 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 and the range of efficiency classes available on the label, in accordance with Annex X;
 - (g) an electronic label in the format and containing the information as set out in Annex VIII shall be made available to dealers for each household dishwasher model;
 - (h) an electronic product information sheet as set out in Annex VIII is made available to dealers for each household dishwasher model;
 - (i) products are not placed on the market that have been designed so that a model's performance is automatically altered in test conditions with the objective of reaching a more favourable level for any of the parameters specified in this Regulation or included in the documentation provided with the product.
2. The energy efficiency class shall be based on the Energy Efficiency Index calculated in accordance with Annex III.

Article 4

Obligations of dealers

In addition to the obligations of dealers laid down in Regulation (EU) 2017/1369, dealers shall ensure that:

- (a) each household dishwasher, at the point of sale, bears the label provided by suppliers in accordance with Article 3(a) displayed on the outside of the front or top of the household dishwasher, in such a way as to be clearly visible;
- (b) the label and product information sheet are provided in the case of distance selling in accordance with Annexes VII and VIII;
- (c) any visual advertisement for a specific model of household dishwasher contains the energy efficiency class and the range of efficiency classes available on the label, in accordance with Annex X;
- (d) 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 and the range of efficiency classes available on the label, in accordance with Annex X.

Article 5

Measurement methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods, which take into account the recognised state-of-the-art measurement and calculation methods, as set out in Annex III.

Article 6

Verification procedure for market surveillance purposes

Member States shall apply the procedure laid down in Annex IX when assessing the conformity of the declared energy efficiency class, water consumption, time duration, acoustic airborne noise emissions and energy consumption and duration of low power modes.

Article 7

Revision

The Commission shall review this Regulation in the light of technological progress and present the results of this review to the Consultation Forum no later than five years after its entry into force. The review shall in particular assess if the improvement potential with regard to energy during the use phase and environmental performance of household dishwashers has been fully exploited by realising changes of user behaviour towards increased purchase of the most energy and resource efficient appliances and the usage of the most energy and resource efficient programmes and if a reparability scoring system in the label would be feasible and beneficial.

In addition, the Commission shall review the label to rescale it when the requirements of Article 11 of the Regulation (EU) 2017/1369 are met.

Article 8

Repeal

Regulation 1059/2010 is repealed as of the day of entry into force of this Regulation.

Article 9

Entry into force and application

1. This Regulation shall enter into force on the 20th day following its publication in the Official Journal of the European Union.
2. It shall apply from XXX.
3. The obligation in Article 3(1)(a) and (b) shall apply four months before XXX.

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

Done at Brussels, [date].

For the Commission
Jean-Claude JUNCKER
The President

DRAFT ANNEXES

OF

COMMISSION DELEGATED REGULATION (EU) .../...

supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of household dishwashers

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ANNEX I

Definitions

In addition to the definitions laid down in article 2, the following definitions shall apply for the purpose of this Regulation:

- (1) 'place settings' means a defined set of crockery, glass and cutlery for use by one person;
- (2) '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;
- (3) '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;
- (4) 'ECO programme or cycle' means the most efficient cleaning programme or cycle, in terms of combined energy and water consumption, that is suitable to clean normally soiled tableware, and to which the information in the label and the product information sheet relates;
- (5) 'off mode' is defined as in Regulation (EC) No 1275/2008;
- (6) '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 user;
- (7) 'equivalent household 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 model number by the same supplier;
- (8) 'end-user' means a consumer buying or expected to buy a household dishwasher;
- (9) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (10) 'nested display' means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (11) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (12) 'alternative text' means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.

ANNEX II

A. 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 Annex III.

Table 1
Energy efficiency classes

Energy efficiency class	Energy Efficiency Index
A (most efficient)	$EEI < 34$
B	$34 \leq EEI < 38$
C	$38 \leq EEI < 43$
D	$43 \leq EEI < 48$
E	$48 \leq EEI < 53$
F	$53 \leq EEI < 58$
G (least efficient)	$EEI \geq 58$

B. Acoustic airborne noise emission classes

The acoustic airborne noise emission class of a household dishwasher shall be determined on the basis of the acoustic airborne noise emissions as set out in Table 2.

The acoustic airborne emissions of a household dishwasher shall be determined in accordance with state-of-the-art of the recommended standard

Table 2
Acoustic airborne noise emission classes

Energy efficiency class	Noise (dB)
Light 	$n < 38$ dB
Medium 	$38 \leq n < 47$

Loud 	$n \geq 47$
-------------------------------------------------------------------------------------------	-------------

ANNEX III

Method for calculating the Energy Efficiency Index

For the calculation of the Energy Efficiency Index (EEI) of a household dishwasher model, the ECO Cycle Energy Consumption (CEC) of the household dishwasher is compared to its Standard Cycle Energy Consumption (SCEC).

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

$$EEI = \frac{CEC}{SCEC} \times 100$$

CEC = ECO Cycle Energy Consumption of the household dishwasher, and rounded to three decimal places;

SCEC = Standard Cycle Energy Consumption of the household dishwasher, and rounded to three decimal places.

- (b) The Standard Cycle Energy Consumption (SCEC) is calculated in kWh/cycle as follows:

- (i) for household dishwashers with rated capacity $ps \geq 11$:

$$SCEC = 0.025 \times ps + 1.350$$

- (ii) for household dishwashers with rated capacity $ps \leq 10$:

$$SCEC = 0.090 \times ps + 0.450$$

where:

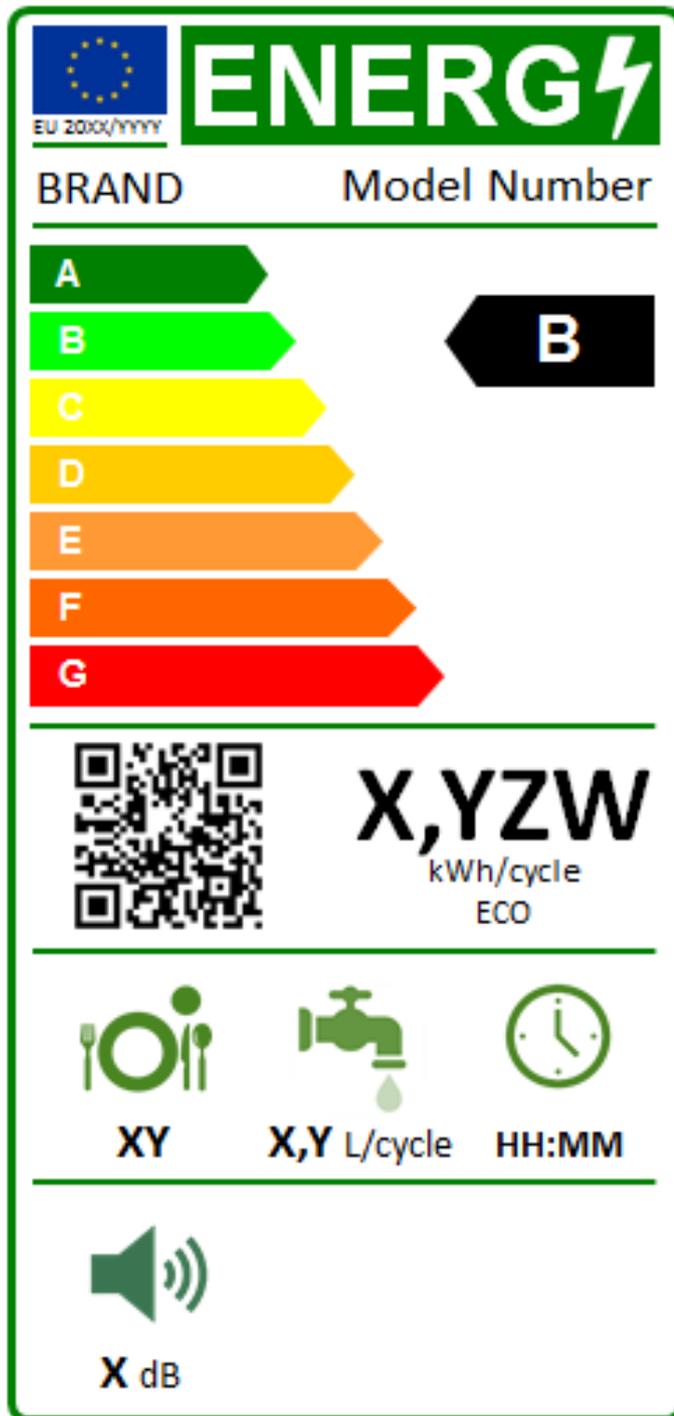
ps = number of place settings

ANNEX IV

Label

1. LABEL

(1) Label



I, II

III

X, IV

VII, V, VI

VIII, IX

(2) 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. ECO cycle energy consumption (CEC) in kWh per cycle, rounded to three decimal places ;
- V. ECO cycle water consumption (CWC) in litres per cycle, rounded to one decimal place;
- VI. the duration of the ECO cycle in hh:mm rounded to the nearest minute;
- VII. rated capacity in standard place settings, for the ECO cycle;
- VIII. airborne acoustical noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer.;
- IX. the airborne noise emission class, determined in accordance with point B of Annex I;
- X. the QR code with access to the product information sheet.

(3) The design of the label shall be in accordance with point 2 of the Annex IV.

2. LABEL DESIGN

The design of the label shall be as in the figure below.

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. **EU label 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, 100 % 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;
— Second line: Calibri regular 16 pt, 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;
— Second line: Calibri regular 16 pt, 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 16 pt, 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 × 15 mm.
16. **Numbering and year of the Regulation:** Calibri bold 9 pt, 100 % black.

ANNEX V

Product information sheet

1. The information in the product information sheet of household dishwashers shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:
 - (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 ECO cycle;
 - (d) energy efficiency class, in accordance with Annex VI;
 - (e) ECO cycle energy consumption (CEC) in kWh per cycle, rounded to three decimal places. It shall be described as 'Energy consumption "W,XYZ" kWh per cycle, based on the ECO cycle using cold water fill. Actual energy consumption will depend on how the appliance is used';
 - (f) the power consumption in off-mode and left-on mode (P_o and P_l) in W, rounded to the nearest integer; and in a condition providing networked standby, the power consumption in networked standby (P_n) in W, rounded to the nearest integer;
 - (g) 'left-on mode' duration, in minutes and rounded to the nearest integer;
 - (h) ECO cycle water consumption (CWC), in litres per cycle, rounded to one decimal place. 'Water consumption "X,Y" litres per cycle, based on the ECO cycle. Actual water consumption will depend on how the appliance is used and on the hardness of the water;
 - (i) indication that the 'ECO programme' is the standard cleaning cycle to which the information in the label and the product information sheet 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;
 - (j) programme time for the ECO cycle, in hh:mm and rounded to the nearest minute;
 - (k) airborne acoustical noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer;
 - (l) if the household dishwasher is intended to be built-in, an indication to this effect.
2. One product information sheet may cover a number of household dishwasher models supplied by the same supplier.
3. The information contained in the product information sheet 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 VI

Technical documentation

1. The technical documentation referred to in Article 3(d) 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 of the 'networked standby';
 - (vii) power consumption in 'left-on mode';
 - (viii) 'left-on mode' duration;
 - (ix) 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 VII

Information to be provided in the case of distance selling, except distance selling on the Internet

1. Any paper based distance selling must show the energy class and the range of available efficiency classes as following the example below, with the colour of the arrow matching the letter of the energy class:



It must be possible for the customer to access the full label and the product information sheet through a free access website, or to request a printed copy.

2. Telemarketing based distance selling must specifically inform the customer of the energy class of the product and the range of energy classes available on the label, and that they can access the full label and the product information sheet through a free access website, or to request a printed copy.

ANNEX VIII

Information to be provided in the case of sale, hire or hire-purchase through the internet

1. For the purpose of points 2 to 5 of this Annex the following definitions shall apply:
 - (a) ‘display mechanism’ means any screen, including tactile screen and visual technology used for displaying internet content to end-users;
 - (b) ‘nested display’ means visual interface where an image or data set is accessed by mouse click, mouse roll-over or tactile screen expansion of another image or data set;
 - (c) ‘tactile screen’ means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
 - (d) ‘alternative text’ means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications.
2. The appropriate label made available by suppliers in accordance with Article 3(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in point 2 of Annex IV. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.
3. The image used for accessing the label in the case of nested display shall:
 - (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
 - (b) indicate on the arrow energy efficiency class of the product in white in a font size equivalent to that of the price; and
 - (c) have one of the following two formats:



4. In the case of nested display, the sequence of display of the label shall be as follows:
 - (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
 - (b) the image shall link to the label;
 - (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
 - (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
 - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

- (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;
 - (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.
5. The appropriate product information sheet made available by suppliers in accordance with Article 3(h) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product information sheet is clearly visible and legible. The product information sheet may be displayed using a nested display, in which case the link used for accessing the product information sheet shall clearly and legibly indicate 'Product information sheet'. If nested display is used, the product information sheet shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

ANNEX IX

Product compliance verification by market surveillance authorities

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Member State authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Regulation, for the requirements referred to in this Annex, the authorities of the Member States shall apply the following procedure:

- (1) The Member State authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
 - (a) the values given in the technical documentation pursuant to Article 3(3) of Regulation (EU) 2017/1369 (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports and
 - (b) the values published on the label and in the product fiche are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
 - (c) when the Member State authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 3.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all models that have been listed as equivalent household dishwasher models in the supplier's technical documentation shall be considered not to comply with this Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Member State authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 3.
- (6) If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household dishwasher models in the supplier's technical documentation shall be considered not to comply with this Regulation.
- (7) The Member State authorities shall provide all relevant information to the authorities of the other Member States and to the Commission without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

Member States' authorities shall use measurement procedures which take into account the generally recognised, state-of-the-art, reliable, accurate and reproducible measurement methods, including methods set out in documents whose reference numbers have been

published for that purpose in the *Official Journal of the European Union*. The Member State authorities shall use the measurement and calculation methods set out in Annex III.

The Member State authorities shall only apply the verification tolerances that are set out in Table 3 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 3

Measured parameter	Verification tolerances
ECO cycle energy consumption (CEC)	The determined value shall not exceed the declared value of CEC by more than 5 %. Where three additional units need to be selected, the arithmetic mean of the determined values of these three units shall not exceed the declared value of CEC by more than 3 %.
ECO cycle water consumption (CWC)	The determined value shall not exceed the declared value of CWC by more than 5 %. Where three additional units need to be selected, the arithmetic mean of the determined values of these three units shall not exceed the declared value of CWC by more than 3 %.
Programme time (T_t)	The determined value shall not exceed the declared values T_t by more than 5 %.
Power consumption in off mode and left-on mode (P_o and P_l)	The determined values of power consumption P_o and P_l of more than 0.50 W shall not exceed the declared values of P_o and P_l by more than 10 %. The determined values of power consumption P_o and P_l of less than or equal to 0.50 W shall not exceed the declared values of P_o and P_l by more than 0.050 W.
Power consumption in modes before the initiation of the cleaning programme (P_b)	The determined values of power consumption P_b of more than 1W shall not exceed the declared values of P_b by more than 10%. The determined values of power consumption P_b of less than or equal to 1 W shall not exceed the declared values of P_b by more than 0.10W
Power consumption in networked-standby mode (P_n)	The determined values of power consumption P_n of more than 2W shall not exceed the declared values of P_n by more than 10%. The determined values of power consumption P_n of less than or equal to 2 W shall not exceed the declared values of P_n by more than 0.20W
Duration of left-on mode (T_l)	The determined value shall not exceed the declared value of T_l by more than 10 %.
Airborne acoustical noise emissions	The measured value shall meet the rated value.

ANNEX X

Displaying the energy class and the range of efficiency classes in visual advertisements and in promotional material

1. For the purposes of ensuring conformity with the requirements laid down in Article 3(1)(e) and Article 4(1)(c), the energy class and the range of efficiency classes available on the label shall be shown on visual advertisements as follows, with the colour of the arrow matching the letter of the energy class:



2. For the purposes of ensuring conformity with the requirements laid down in Article 3(1)(f) and Article 4(1)(d) the energy class and the range of efficiency classes available on the label shall be shown in promotional material as follows, with the colour of the arrow matching the letter of the energy class

