

**COMMISSION DELEGATED REGULATION (EU) 2019/2017****of 11 March 2019****supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of household dishwashers and repealing Commission Delegated Regulation (EU) No 1059/2010****(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 labelling and repealing Directive 2010/30/EU<sup>(1)</sup>, and in particular Article 11(5) and Article 16 thereof,

Whereas:

- (1) Regulation (EU) 2017/1369 of the European Parliament and of the Council empowers the Commission to adopt delegated acts as regards the labelling or re-scaling of the labelling of product 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<sup>(2)</sup>.
- (3) The Communication from the Commission COM(2016) 773 final<sup>(3)</sup> (ecodesign working plan) established by the Commission in application of Article 16(1) of Directive 2009/125/EC of the European Parliament and of the Council<sup>(4)</sup> sets out the working priorities under the ecodesign and energy labelling framework for the period 2016-2019. The ecodesign working plan identifies the energy-related product groups to be considered as priorities for the undertaking of preparatory studies and eventual adoption of implementing measures, as well as the review of Commission Regulation (EU) No 1016/2010<sup>(5)</sup> and Delegated Regulation (EU) No 1059/2010.
- (4) Measures from the ecodesign working plan have an estimated potential to deliver in total more than 260 TWh of annual final energy savings in 2030, which is equivalent to reducing greenhouse gas emissions by approximately 100 million tonnes per year in 2030. Household dishwashers is one of the product groups listed in the working plan, with estimated annual electricity savings of 2,1 TWh, leading to GHG emission reductions of 0,7 Mt CO<sub>2</sub> eq/year, and estimated water savings of 16 million m<sup>3</sup> in 2030.
- (5) Household 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.
- (6) The Commission has reviewed Delegated Regulation (EU) No 1059/2010 as required by its Article 7 and analysed technical, environmental and economic aspects as well as the impact of user behaviour. The review was carried out 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.
- (7) The review concluded that there was a need to introduce revised energy labelling requirements for household dishwashers.

<sup>(1)</sup> OJ L 198, 28.7.2017, p. 1.

<sup>(2)</sup> Commission Delegated Regulation (EU) No 1059/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household dishwashers (OJ L 314, 30.11.2010, p. 1).

<sup>(3)</sup> Communication from the Commission. Ecodesign working plan 2016-2019 (COM(2016) 773 final, Brussels, 30.11.2016).

<sup>(4)</sup> 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 products (OJ L 285, 31.10.2009, p. 10).

<sup>(5)</sup> Commission Regulation (EU) No 1016/2010 of 10 November 2010 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household dishwashers (OJ L 293, 11.11.2010, p. 31).

- (8) Non-household dishwashers have distinct characteristics and uses. They are subject to other regulatory work, in particular Directive 2006/42/EC of the European Parliament and of the Council <sup>(6)</sup>, and should not be included in the scope of this Regulation. This Regulation for household dishwashers should apply to dishwashers with the same technical characteristics, regardless of the setting they are used in.
- (9) The environmental aspects of household dishwashers that have been identified as significant for the purposes of this Regulation are energy and water consumption in the use phase, the generation of waste at the end of life, the emissions to air and water in the production phase due to the extraction and processing of raw materials and in the use phase because of the consumption of electricity.
- (10) It appears from the review that the electricity and water consumption of household dishwashers can be further reduced by implementing energy labelling measures focusing on better differentiating between products. This should give suppliers an incentive to further improve the energy and resource efficiency of household dishwashers while accelerating the market transformation towards more efficient technologies.
- (11) The energy labelling of household dishwashers enable consumers to make informed choices towards more energy and resource efficient appliances. The understanding and relevance of the information provided on the label have been confirmed through a specific consumer survey in line with Article 14(2) of Regulation (EU) 2017/1369.
- (12) Household dishwashers that are displayed at trade fairs should bear the energy label if the first unit of the model has already been placed on the market or is placed on the market on the trade fair.
- (13) The relevant product parameters should be measured using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council <sup>(7)</sup>.
- (14) Recognizing the growth of sales of energy-related product through web-stores and internet sales platforms, rather than directly from suppliers, it should be clarified that service providers of web-stores and internet sales platforms should be responsible for displaying the label provided by the supplier in proximity to the price. They should inform the supplier of that obligation, but should not be responsible for the accuracy or content of the label and the product information sheet provided. However, in application of Article 14(1)(b) of Directive 2000/31/EC of the European Parliament and of the Council <sup>(8)</sup> on electronic commerce, such internet hosting platforms should act expeditiously to remove or to disable access to information about the product in question if they are aware of the non-compliance (e.g. missing, incomplete or incorrect label or product information sheet) for example if informed by the market surveillance authority. A supplier selling directly to end-users via its own website is covered by dealers' distance selling obligations referred to in Article 5 of Regulation (EU) 2017/1369.
- (15) The measures provided for in this Regulation were discussed by the Consultation Forum and with the Member States experts in accordance with Article 17 of Regulation (EU) 2017/1369.
- (16) Delegated Regulation (EU) No 1059/2010 should be repealed.

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, including built-in household dishwashers and electric mains-operated household dishwashers that can also be powered by batteries.

<sup>(6)</sup> Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery (OJ L 157, 9.6.2006, p. 24).

<sup>(7)</sup> Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation, amending Council Directives 89/686/EEC and 93/15/EEC and Directives 94/9/EC, 94/25/EC, 95/16/EC, 97/23/EC, 98/34/EC, 2004/22/EC, 2007/23/EC, 2009/23/EC and 2009/105/EC of the European Parliament and of the Council and repealing Council Decision 87/95/EEC and Decision No 1673/2006/EC of the European Parliament and of the Council (OJ L 316, 14.11.2012, p. 12).

<sup>(8)</sup> Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ('Directive on electronic commerce') (OJ L 178, 17.7.2000, p. 1).

2. This Regulation shall not apply to:

- (a) dishwashers in the scope of Directive 2006/42/EC;
- (b) battery-operated household dishwashers that can be connected to the mains through an AC/DC converter purchased separately.

#### Article 2

##### Definitions

For the purposes of this Regulation, the following definitions shall apply:

- (1) 'mains' or 'electric mains' means the electricity supply from the grid of 230 ( $\pm 10\%$ ) volts of alternating current at 50 Hz;
- (2) 'household dishwasher' means a machine which cleans and rinses tableware, and which is declared by the manufacturer in the Declaration of Conformity to comply with Directive 2014/35/EU of the European Parliament and of the Council<sup>(9)</sup> or with Directive 2014/53/EU of the European Parliament and of the Council<sup>(10)</sup>;
- (3) 'built-in household dishwasher' means a household dishwasher that is designed, tested and marketed exclusively:
  - (a) to be installed in cabinetry or encased (top, bottom and sides) by panels;
  - (b) to be securely fastened to the sides, top or floor of the cabinetry or panels; and
  - (c) to be equipped with an integral factory-finished face or to be fitted with a custom front panel.
- (4) 'point of sale' means a location where household dishwashers are displayed or offered for sale, hire or hire-purchase.

For the purposes of the annexes, additional definitions are set out in Annex I.

#### Article 3

##### Obligations of suppliers

1. Suppliers shall ensure that:

- (a) each household dishwasher is supplied with a printed label in the format as set out in Annex III;
- (b) the parameters of the product information sheet, as set out in Annex V, are entered into the product database;
- (c) if specifically requested by the dealer, the product information sheet shall be made available in printed form;
- (d) the content of the technical documentation, set out in Annex VI, is entered into the product database;
- (e) any visual advertisement for a specific model of household dishwasher contains the energy efficiency class and the range of energy efficiency classes available on the label in accordance with Annex VII and Annex VIII;
- (f) any technical promotional material concerning a specific model of household dishwasher, including on the internet, which describes its specific technical parameters, includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;

<sup>(9)</sup> Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits (OJ L 96, 29.3.2014, p. 357).

<sup>(10)</sup> Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC (OJ L 153, 22.5.2014, p. 62).

- (g) an electronic label in the format and containing the information, as set out in Annex III, is made available to dealers for each household dishwasher model;
  - (h) an electronic product information sheet, as set out in Annex V, is made available to dealers for each household dishwasher model.
2. The energy efficiency class and the acoustic airborne noise emission class are defined in Annex II and shall be calculated in accordance with Annex IV.

#### *Article 4*

### **Obligations of dealers**

Dealers shall ensure that:

- (a) each household dishwasher, at the point of sale, including at trade fairs, bears the label provided by suppliers in accordance with point 1(a) of Article 3, with the label being displayed for built-in household dishwashers in such a way as to be clearly visible, and for all other household dishwashers in such a way as to be clearly visible on the outside of the front or top of the household dishwasher;
- (b) in the event of distance selling, the label and product information sheet are provided in accordance with Annexes VII and VIII;
- (c) any visual advertisement for a specific model of household dishwasher contains the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;
- (d) any technical promotional material concerning a specific model of household dishwasher, including on the internet, which describes its specific technical parameters, includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII.

#### *Article 5*

### **Obligations of internet hosting platforms**

Where a hosting service provider referred to in Article 14 of Directive 2000/31/EC allows the direct selling of household dishwashers through its internet website, the service provider shall enable the showing of the electronic label and electronic product information sheet provided by the dealer on the display mechanism in accordance with the provisions of Annex VIII and shall inform the dealer of the obligation to display them.

#### *Article 6*

### **Measurement methods**

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 set out in Annex IV.

#### *Article 7*

### **Verification procedure for market surveillance purposes**

Member States shall apply the verification procedure laid down in Annex IX to this Regulation when performing the market surveillance checks referred to in paragraph 3 of Article 8 of Regulation (EU) 2017/1369.

#### *Article 8*

### **Review**

The Commission shall review this Regulation in the light of technological progress and present the results of this review including, if appropriate, a draft revision proposal, to the Consultation Forum no later than 25 December 2025.

The review shall in particular assess the following:

- (a) the improvement potential with regard to the energy consumption, functional and environmental performance of household dishwashers;
- (b) the effectiveness of existing measures in achieving changes in end-user behaviour in purchasing more energy and resource efficient appliances and using more energy and resource efficient programmes;
- (c) the possibility to address circular economy objectives.

*Article 9*

### **Repeal**

Delegated Regulation (EU) No 1059/2010 is repealed as of 1 March 2021.

*Article 10*

### **Transitional measures**

As from 25 December 2019 until 28 February 2021, the product fiche required under point (b) of Article 3 of Delegated Regulation (EU) No 1059/2010 may be made available through the product database instead of being provided in printed form with the product. In this case, the supplier shall ensure that if specifically requested by the dealer, the product fiche shall be made available in printed form.

*Article 11*

### **Entry into force and application**

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

It shall apply from 1 March 2021. However, Article 10 shall apply from 25 December 2019 and point 1(a), (b) and (c) of Article 3 shall apply from 1 November 2020.

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

Done at Brussels, 11 March 2019.

*For the Commission*

*The President*

Jean-Claude JUNCKER

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## ANNEX I

**Definitions applicable for the annexes**

The following definitions shall apply:

- (1) 'Energy Efficiency Index' (EEI) means the ratio of the eco programme energy consumption to the standard programme energy consumption;
- (2) 'eco programme energy consumption' (EPEC) means the energy consumption of a household dishwasher for the eco programme, expressed in kilowatt hour per cycle;
- (3) 'standard programme energy consumption' (SPEC) means the energy consumption taken as a reference as a function of the rated capacity of the household dishwasher, expressed in kilowatt hour per cycle;
- (4) 'programme' means a series of operations that are pre-defined and are declared by the supplier as suitable for specified levels of soil or types of load, or both;
- (5) 'cycle' means a complete cleaning, rinsing, and drying process, as defined by the programme selected, consisting of a series of operations until all activity ceases;
- (6) 'quick response' (QR) code means a matrix barcode included on the energy label of a product model that links to that model's information in the public part of the product database;
- (7) 'place setting' (ps) means a set of tableware for use by one person, not including serving pieces;
- (8) 'serving pieces' means items for the preparation and serving of food which can include pots, serving bowls, serving cutlery and a platter;
- (9) 'rated capacity' means the maximum number of place settings together with the serving pieces, which can be cleaned, rinsed and dried in a household dishwasher in one cycle when loaded in accordance with the supplier's instructions;
- (10) 'eco programme water consumption' (EPWC) means the water consumption of a household dishwasher for the eco programme, expressed in litres per cycle;
- (11) 'cleaning performance index' ( $I_C$ ) means the ratio of the cleaning performance of a household dishwasher to the cleaning performance of a reference household dishwasher;
- (12) 'drying performance index' ( $I_D$ ) means the ratio of the drying performance of a household dishwasher to the drying performance of a reference household dishwasher;
- (13) 'programme duration' ( $T_i$ ) means the length of time beginning with the initiation of the programme selected, excluding any user programmed delay, until the end of the programme is indicated and the user has access to the load;
- (14) 'eco' means the name of the programme of a household dishwasher declared by the manufacturer as suitable to clean normally soiled tableware, and to which the information on the energy label and the product information sheet relates;
- (15) 'off mode' means a condition in which the household dishwasher is connected to the mains and is not providing any function; the following shall also be considered as off mode:
  - (a) conditions providing only an indication of off mode;
  - (b) conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2014/30/EU of the European Parliament and of the Council<sup>(1)</sup>;

<sup>(1)</sup> Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (OJ L 96, 29.3.2014, p. 79).

- (16) 'standby mode' means a condition where the household dishwasher is connected to the mains and provides only the following functions, which may persist for an indefinite time:
- (a) reactivation function, or reactivation function and a mere indication of enabled reactivation function, and/or
  - (b) reactivation function through a connection to a network; and/or
  - (c) information or status display, and/or
  - (d) detection function for emergency measures;
- (17) 'network' means a communication infrastructure with a topology of links, an architecture, including the physical components, organisational principles, communication procedures and formats (protocols);
- (18) 'delay start' means a condition where the user has selected a specified delay to the beginning of the cycle of the selected programme;
- (19) 'guarantee' means any undertaking by the retailer or supplier to the consumer to:
- (a) reimburse the price paid; or
  - (b) replace, repair or handle the household dishwashers in any way if they do not meet the specifications set out in the guarantee statement or in the relevant advertising;
- (20) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (21) 'nested display' means any 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;
- (22) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (23) '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.
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## 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 EEI of a household dishwasher shall be calculated in accordance with Annex IV.

Table 1

**Energy efficiency classes of electronic displays**

Energy efficiency class	Energy Efficiency Index
A	$EEI < 32$
B	$32 \leq EEI < 38$
C	$38 \leq EEI < 44$
D	$44 \leq EEI < 50$
E	$50 \leq EEI < 56$
F	$56 \leq EEI < 62$
G	$EEI \geq 62$

**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.

Table 2

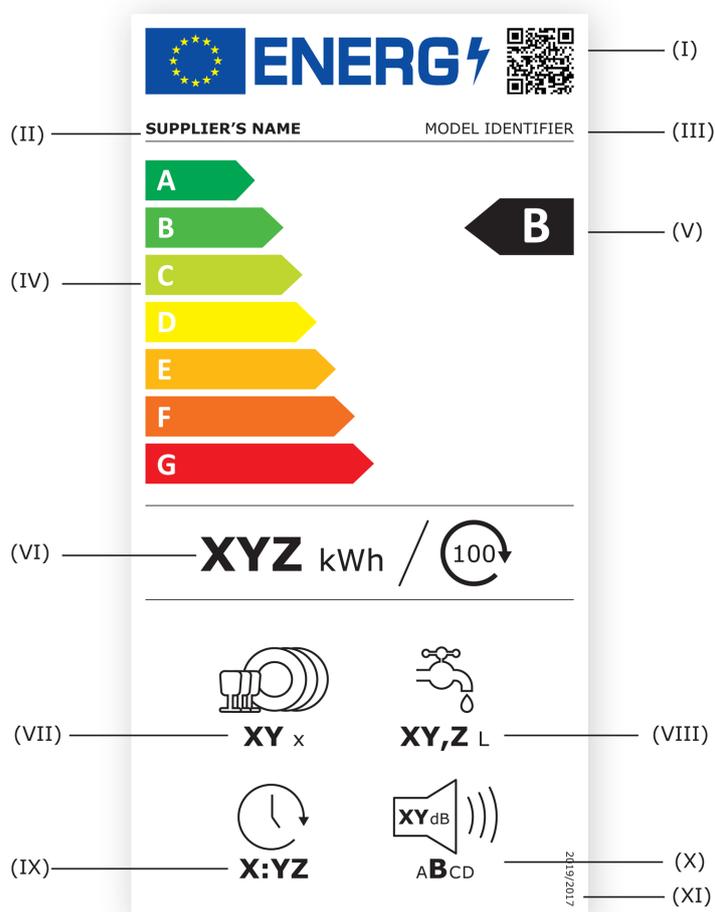
**Acoustic airborne noise emission classes**

Acoustic airborne noise emission class	Noise (dB(A))
A	$n < 39$
B	$39 \leq n < 45$
C	$45 \leq n < 51$
D	$51 \leq n$

## ANNEX III

## Label

## 1. LABEL

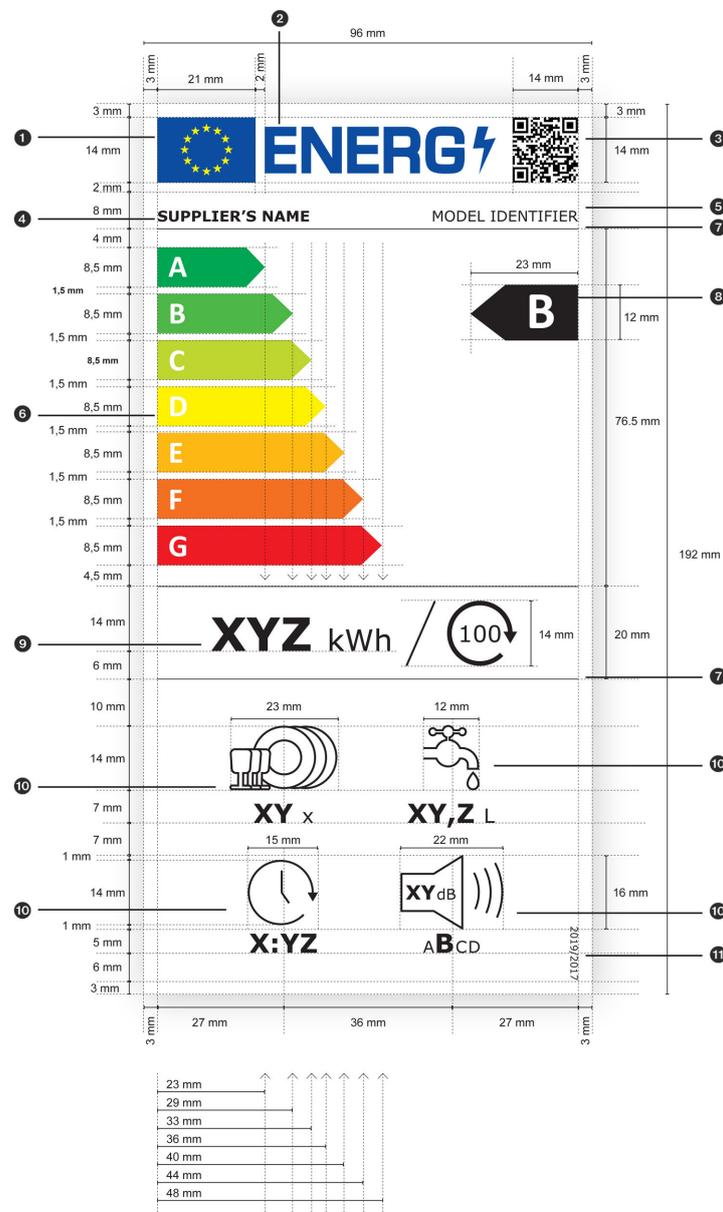


The following information shall be included in the label:

- I. QR code;
- II. supplier's name or trade mark;
- III. supplier's model identifier;
- IV. scale of energy efficiency classes from A to G;
- V. the energy efficiency class determined in accordance with point A of Annex II;
- VI. eco programme energy consumption (EPEC) in kWh per 100 cycles, rounded to the nearest integer;
- VII. rated capacity in standard place settings, for the eco programme;
- VIII. eco programme water consumption (EPWC) in litres per cycle, rounded to one decimal place;
- IX. duration of the eco programme in h:min rounded to the nearest minute;
- X. airborne acoustic noise emissions expressed in dB(A) with respect to 1 pW and rounded to the nearest integer, and airborne acoustic noise emission class, determined in accordance with point B of Annex II;
- XI. the number of this Regulation, that is '2019/2017'.

## 2. LABEL DESIGN

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



Whereby:

- the label shall be at least 96 mm wide and 192 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above;
- the background of the label shall be 100 % white;
- the typefaces shall be Verdana and Calibri;
- the dimensions and specifications of the elements constituting the label shall be as indicated in the label design for household dishwashers;
- colours shall be CMYK – cyan, magenta, yellow and black, following this example: 0,70,100,0: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black;

- (f) the label shall fulfil all the following requirements (numbers refer to the figure above):
- ① the colours of the EU logo shall be as follows:
    - the background: 100,80,0,0;
    - the stars: 0,0,100,0;
  - ② the colour of the energy logo shall be: 100,80,0,0;
  - ③ the QR code shall be 100 % black;
  - ④ the supplier's name shall be 100 % black and in Verdana Bold, 9 pt;
  - ⑤ the model identifier shall be 100 % black and in Verdana Regular 9 pt;
  - ⑥ the A to G scale shall be as follows:
    - the letters of the energy efficiency scale shall be 100 % white and in Calibri Bold 19 pt; the letters shall be centred on an axis at 4,5 mm from the left side of the arrows;
    - the colours of the A to G scale arrows shall be as follows:
      - A-class: 100,0,100,0;
      - B-class: 70,0,100,0;
      - C-class: 30,0,100,0;
      - D-class: 0,0,100,0;
      - E-class: 0,30,100,0;
      - F-class: 0,70,100,0;
      - G-class: 0,100,100,0;
  - ⑦ the internal dividers shall have a weight of 0,5 pt and the colour shall be 100 % black;
  - ⑧ the letter of the energy efficiency class shall be 100 % white and in Calibri Bold 33 pt. The energy efficiency class arrow and the corresponding arrow in the A to G scale shall be positioned in such a way that their tips are aligned. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow which shall be 100 % black;
  - ⑨ the value of the eco programme energy consumption per 100 cycles shall be in Verdana Bold 28 pt; 'kWh' shall be in Verdana Regular 18 pt; the number '100' in the pictogram representing 100 cycles shall be in Verdana Regular 14 pt. The value and unit shall be centred and 100 % black;
  - ⑩ the pictograms shall be as shown as in the label designs and as follows:
    - the pictograms' lines shall have a weight of 1,2 pt and they and the texts (numbers and units) shall be 100 % black;
    - the texts under the pictograms shall be in Verdana Bold 16 pt with the unit in Verdana Regular 12 pt, and they shall be centred under the pictograms;
    - the airborne acoustical noise emission pictogram: the number of decibels in the loudspeaker shall be in Verdana Bold 12 pt, with the unit 'dB' in Verdana Regular 9 pt; the range of noise classes (A to D) shall be centred under the pictogram, with the letter of the applicable noise class in Verdana Bold 16 pt and the other letters of the noise classes in Verdana Regular 10 pt;
  - ⑪ the number of the regulation shall be 100 % black and in Verdana Regular 6 pt.
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## ANNEX IV

**Measurement methods and calculations**

For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in the *Official Journal of the European Union*, or other reliable, accurate and reproducible methods, which takes into account the generally recognised state-of-the-art, and in line with the following provisions.

The energy consumption, EEI, water consumption, programme duration, cleaning and drying performance, and airborne acoustical noise emissions of a household dishwasher model shall be measured and/or calculated using the eco programme with the household dishwasher loaded at rated capacity. The energy consumption, water consumption, programme duration, cleaning and drying performance shall be measured concurrently.

The EPWC is expressed in litres per cycle and rounded to one decimal place.

The duration of the eco programme ( $T_e$ ) is expressed in hours and minutes and rounded to the nearest minute.

Airborne acoustical noise emissions is measured in dB(A) with respect to 1 pW and rounded to the nearest integer.

**1. ENERGY EFFICIENCY INDEX**

For the calculation of the EEI of a household dishwasher model, the EPEC of the household dishwasher is compared to its SPEC.

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

$$EEI = (EPEC/SPEC) \times 100$$

where:

EPEC is the eco programme energy consumption of the household dishwasher, measured in kWh/cycle and rounded to three decimal places;

SPEC is the standard programme energy consumption of the household dishwasher.

(b) The SPEC is calculated in kWh/cycle and rounded to three decimal places as follows:

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

$$SPEC = 0,025 \times ps + 1,350$$

(2) for household dishwashers with rated capacity  $ps \leq 9$  or width  $\leq 50$  cm:

$$SPEC = 0,090 \times ps + 0,450$$

where  $ps$  is the number of place settings.

**2. CLEANING PERFORMANCE INDEX**

For the calculation of the cleaning performance index ( $I_c$ ) of a household dishwasher model, the cleaning performance of the eco programme is compared to the cleaning performance of a reference dishwasher.

The  $I_c$  is calculated as follows and rounded to two decimal places:

$$I_c = \exp(\ln I_c)$$

and

$$\ln I_c = (1/n) \times \sum_{i=1}^n \ln(C_{T,i}/C_{R,i})$$

where:

$C_{T,i}$  is the cleaning performance of the eco programme of the household dishwasher under test for one test run ( $i$ ), rounded to two decimal places;

$C_{R,i}$  is the cleaning performance of the reference dishwasher for one test run ( $i$ ), rounded to two decimal places;

$n$  is the number of test runs.

### 3. DRYING PERFORMANCE INDEX

For the calculation of the drying performance index ( $I_D$ ) of a household dishwasher model, the drying performance of the eco programme is compared to the drying performance of the reference dishwasher.

The  $I_D$  is calculated as follows and rounded to two decimal places:

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

and

$$\ln I_D = (1/n) \times \sum_{i=1}^n \ln(I_{D,i})$$

where:

$I_{D,i}$  is the drying performance index of the eco programme of the household dishwasher under test for one test run ( $i$ );

$n$  is the number of combined cleaning and drying test runs.

The  $I_{D,i}$  is calculated as follows and rounded to two decimal places:

$$\ln I_{D,i} = \ln (D_{T,i}/D_{R,t})$$

where:

$D_{T,i}$  is the average drying performance score of the eco programme of the household dishwasher under test for one test run ( $i$ ), rounded to two decimal places;

$D_{R,t}$  is the target drying score of the reference dishwasher, rounded to two decimal places.

### 4. LOW POWER MODES

The power consumption of the off mode ( $P_o$ ), standby mode ( $P_{sm}$ ) and where applicable delay start ( $P_{ds}$ ) are measured. The measured values are expressed in W and rounded to two decimal places.

During measurements of the power consumption in low power modes, the following shall be checked and recorded:

- the display or not of information;
  - the activation or not of a network connection.
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## ANNEX V

**Product information sheet**

The information part of the product information sheet of household dishwashers pursuant to point 1(b) of Article 3 shall be entered into the product database by the supplier according to Table 3.

The user manual or other literature provided with the product shall clearly indicate the link to the model in the product database as a human-readable Uniform Resource Locator (URL) or as QR-code or by providing the product registration number.

Table 3

**Content, order and format of the product information sheet**

**Supplier's name or trade mark:**

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**Supplier's address <sup>(b)</sup>:**

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**Model identifier:**

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**General product parameters:**

Parameter	Value	Parameter	Value	
Rated capacity <sup>(a)</sup> (ps)	x	Dimensions in cm	Height	x
			Width	x
			Depth	x
EEI <sup>(a)</sup>	x,x	Energy efficiency class <sup>(a)</sup>	[A/B/C/D/E/F/G] <sup>(c)</sup>	
Cleaning performance index <sup>(a)</sup>	x,xx	Drying performance index <sup>(a)</sup>	x,xx	
Energy consumption in kWh [per cycle], based on the eco programme using cold water fill. Actual energy consumption will depend on how the appliance is used.	x,xxx	Water consumption in litres [per cycle], based on the eco programme. Actual water consumption will depend on how the appliance is used and on the hardness of the water.	x,x	
Programme duration <sup>(a)</sup> (h:min)	x:xx	Type	[built-in/free-standing]	
Airborne acoustical noise emissions <sup>(a)</sup> (dB(A) re 1 pW)	x	Airborne acoustical noise emission class <sup>(a)</sup>	[A/B/C/D] <sup>(c)</sup>	
Off-mode (W)	x,xx	Standby mode (W)	x,xx	
Delay start (W) (if applicable)	x,xx	Networked standby (W) (if applicable)	x,xx	

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**Minimum duration of the guarantee offered by the supplier <sup>(b)</sup>:**

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**Additional information:**

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Weblink to the supplier's website, where the information in point 6 of Annex II to Commission Regulation (EU) 2019/2022 <sup>(1)</sup> <sup>(b)</sup> is found:

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<sup>(a)</sup> for the eco programme.

<sup>(b)</sup> changes to these items shall not be considered relevant for the purposes of paragraph 4 of Article 4 of Regulation (EU) 2017/1369.

<sup>(c)</sup> if the product database automatically generates the definitive content of this cell the supplier shall not enter these data.

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<sup>(1)</sup> Commission Regulation (EU) 2019/2022 of 1 October 2019 laying down ecodesign requirements for household dishwashers pursuant to Directive 2009/125/EC of the European Parliament and of the Council amending Commission Regulation (EC) No 1275/2008 and repealing Commission Regulation (EU) No 1016/2010 (see page 267 of this Official Journal).

## ANNEX VI

**Technical documentation**

1. The technical documentation referred to in point 1(d) of Article 3 shall include:

- (a) information as set out in Annex V;
- (b) information as set out in Table 4; these values are considered as the declared values for the purpose of the verification procedure in Annex IX;

Table 4

**Information to be included in the technical documentation**

PARAMETER	UNIT	VALUE
Eco programme energy consumption (EPEC) rounded to three decimal places	kWh/cycle	X,XXX
Standard programme energy consumption (SPEC) rounded to three decimal places	kWh/cycle	X,XXX
Energy Efficiency Index (EEI)	—	X,X
Eco programme water consumption (EPWC) rounded to one decimal place	l/cycle	X,X
Cleaning performance index ( $I_C$ )	—	X,XX
Drying performance index ( $I_D$ )	—	X,XX
Duration of the eco programme ( $T_e$ ) rounded to the nearest minute	h:min	X:XX
Power consumption in off-mode ( $P_o$ ) rounded to two decimal places	W	X,XX
Power consumption in standby mode ( $P_{sm}$ ) rounded to two decimal places	W	X,XX
Does standby mode include the display of information?	—	Yes/No
Power consumption in standby mode ( $P_{sm}$ ) in condition of networked standby (if applicable), rounded to two decimal places	W	X,XX
Power consumption in delay start ( $P_{ds}$ ) (if applicable) rounded to two decimal places	W	X,XX
Airborne acoustical noise emissions	dB(A) re 1 pW	X

(c) where appropriate, the references of the harmonised standards applied;

(d) where appropriate, the other technical standards and specifications used;

- (e) the details and the results of calculations performed in accordance with Annex IV;
  - (f) a list of all equivalent models including the model identifier.
2. Where the information included in the technical documentation for a particular household dishwasher model has been obtained by any of the following methods, or both:
- from a model that has the same technical characteristics relevant for the technical information to be provided but is produced by a different supplier;
  - by calculation on the basis of design or extrapolation from another model of the same or a different supplier,
- the technical documentation shall include the details of such calculation, the assessment undertaken by suppliers to verify the accuracy of the calculation and, where appropriate, the declaration of identity between the models of different suppliers.
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## ANNEX VII

**Information to be provided in visual advertisements, in technical promotional material in distance selling and in telemarketing, except distance selling on the internet**

1. In visual advertisements, for the purposes of ensuring conformity with the requirements laid down in point 1(e) of Article 3 and point (c) of Article 4, the energy efficiency class and the range of energy efficiency classes available on the label shall be shown as set out in point 4 of this annex.
2. In technical promotional material, for the purposes of ensuring conformity with the requirements laid down in point 1(f) of Article 3 and point (d) of Article 4, the energy efficiency class and the range of energy efficiency classes available on the label shall be shown as set out in point 4 of this annex.
3. Any paper-based distance selling must show the energy efficiency class and the range of energy efficiency classes available on the label as set out in point 4 of this annex.
4. The energy efficiency class and the range of energy efficiency classes shall be shown, as indicated in Figure 1, with:
  - (a) an arrow, containing the letter of the energy efficiency class in 100 % white, Calibri Bold, and in a font size at least equivalent to that of the price, when the price is shown;
  - (b) the colour of the arrow matching the colour of the energy efficiency class;
  - (c) the range of available energy efficiency classes in 100 % black; and,
  - (d) the size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a border of 0,5 pt in 100 % black placed around the arrow and the letter of the energy efficiency class.

By way of derogation, if the visual advertisement, technical promotional material or paper-based distance selling is printed in monochrome, the arrow can be in monochrome in that visual advertisement, technical promotional material or paper-based distance selling.

*Figure 1*

**Coloured/monochrome left/right arrow, with range of energy efficiency classes indicated**



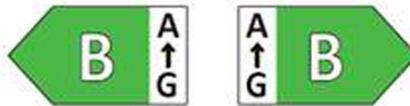
5. Telemarketing-based distance selling must specifically inform the customer of the energy efficiency class of the product and of the range of energy efficiency classes available on the label, and that the customer can access the label and the product information sheet through the product database website, or by requesting a printed copy.
6. For all the situations mentioned in points 1 to 3 and 5, it must be possible for the customer to obtain, on request, a printed copy of the label and the product information sheet.

## ANNEX VIII

**Information to be provided in the case of distance selling through the internet**

1. The electronic label made available by suppliers in accordance with point 1(g) of Article 3 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 III. 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 2 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.
2. The image used for accessing the label in the case of nested display, as indicated in Figure 2, shall:
  - (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
  - (b) indicate the energy efficiency class of the product on the arrow in 100 % white, Calibri Bold and in a font size equivalent to that of the price;
  - (c) have the range of available energy efficiency classes in 100 % black; and,
  - (d) have one of the following two formats, and its size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a visible border in 100 % black placed around the arrow and the letter of the energy efficiency class:

Figure 2

**Coloured left/right arrow, with range of energy efficiency classes indicated**

3. In the case of nested display, the sequence of display of the label shall be as follows:
  - (a) the image referred to in point 2 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 set out in Annex III;
  - (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.
4. The electronic product information sheet made available by suppliers in accordance with point 1(h) of Article 3 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 or by referring to the product database, in which case the link used for accessing the product information sheet shall clearly and legibly indicate 'Product information sheet'. If a 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

**Verification procedure for market surveillance purposes**

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 information sheet shall not be more favourable for the supplier than the values reported in the technical documentation.

Where a model has been designed to be able to detect it is being tested (e.g. by recognising the test conditions or test cycle), and to react specifically by automatically altering its performance during the test with the objective of reaching a more favourable level for any of the parameters specified in this Regulation or included in the technical documentation or included in any of the documentation provided, the model and all equivalent models shall be considered not compliant.

When verifying the compliance of a product model with the requirements laid down in this Regulation, 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 3 of Article 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 information sheet are not more favourable for the supplier than the declared values, and the indicated energy efficiency class and the airborne acoustical noise emission class are 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 5.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all equivalent models 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 equivalent models.
- (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 5.
- (6) If the result referred to in point 5 is not achieved, the model and all equivalent models 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.

The Member State authorities shall use the measurement and calculation methods set out in Annex IV.

The Member State authorities shall only apply the verification tolerances that are set out in Table 5 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. For the parameters in Table 5, no other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 5

**Verification tolerances**

Parameter	Verification tolerances
Eco programme energy consumption (EPEC)	The determined value (*) shall not exceed the declared value of EPEC by more than 5 %.
Eco programme water consumption (EPWC)	The determined value (*) shall not exceed the declared value of EPWC by more than 5 %.
Cleaning performance index ( $I_C$ )	The determined value (*) shall not be less than the declared value of $I_C$ by more than 14 %.
Drying performance index ( $I_D$ )	The determined value (*) shall not be less than the declared value of $I_D$ by more than 12 %.
Programme duration ( $T_i$ )	The determined value (*) shall not exceed the declared values $T_i$ by more than 5 % or 10 minutes, whichever is the longer.
Power consumption in off mode ( $P_o$ )	The determined value (*) of power consumption $P_o$ shall not exceed the declared value by more than 0,10 W.
Power consumption in standby mode ( $P_{sm}$ )	The determined value (*) of power consumption $P_{sm}$ shall not exceed the declared value by more than 10 % if the declared value is higher than 1,00 W, or by more than 0,10 W if the declared value is lower than or equal to 1,00 W.
Power consumption in delay start ( $P_{ds}$ )	The determined value (*) of power consumption $P_{ds}$ shall not exceed the declared value by more than 10 % if the declared value is higher than 1,00 W, or by more than 0,10 W if the declared value is lower than or equal to 1,00 W.
Airborne acoustic noise emissions	The determined value (*) shall not exceed the declared value by more than 2 dB(A) re 1pW.

(\*) In the case of three additional units tested as prescribed in point 4, the determined value means the arithmetical mean of the values determined for these three additional units.