



Brussels, **XXX**  
[...](2018) **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 washing machines and household washer-dryers**

**and repealing Commission Delegated Regulation (EU) No 1061/2010  
and Commission Directive 96/60/EC**

(Text with EEA relevance)

## EXPLANATORY MEMORANDUM

### 1. CONTEXT OF THE DELEGATED ACT

#### Legal and political context of the proposal

The Ecodesign Framework Directive requires manufacturers of energy-related products to improve their products' environmental performance by meeting:

- minimum energy efficiency requirements; and
- other environmental criteria such as water consumption, emission levels or minimum durability of certain components.

These requirements need to be met before the products can place their products on the market.

The Energy Labelling Framework Regulation – Regulation (EU) 2017/1369 of the European Parliament and of the Council<sup>1</sup> – establishes a framework for providing accurate, relevant and comparable information on the specific energy consumption of energy-related products and other environmental information. This makes it easier for consumers to choose products that are more resource efficient. The Regulation complements the Ecodesign Framework Directive by enabling end-consumers to identify the better-performing products via an A-G/green-to-red scale. The energy label is recognised and used by 85 % of Europeans. The legislative framework builds upon the combined effect of these two pieces of legislation.

The ecodesign and energy labelling framework are central to making Europe more energy efficient, contributing in particular to: (i) the 'Energy union framework strategy'; and (ii) the priority of a 'Deeper and fairer internal market with a strengthened industrial base'. Firstly, the framework pushes industry to improve the energy efficiency of products and removes the worst-performing ones from the market. Secondly, it helps consumers and companies to reduce their energy bills. This supports competitiveness and innovation in the industrial and services sectors. Thirdly, it ensures that manufacturers and importers responsible for placing products on the EU market have to comply with a single set of EU-wide rules only.

These two instruments are key components of the Union policy for making products placed on the market or put into service in the European Economic Area (EEA) more energy efficient and environmentally friendly. They are instrumental in achieving the energy savings objectives for 2020 and 2030, and their implementation is reinforced by the current (2016-2019) ecodesign working plan. It is also expected to contribute significantly to the transition towards a more circular economy, as detailed in the circular economy action plan 2015<sup>2</sup>. Furthermore, the implementation of Regulation (EU) 2017/1369 will contribute to the EU's target of reducing greenhouse gases by at least 20 % by 2020 and by at least 40 % by 2030.

Commission Regulation (EU) No 1061/2010<sup>3</sup> sets energy labelling requirements for household washing machines and Commission Directive 96/60/EC sets energy labelling requirements for household combined washer-driers<sup>4</sup>.

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<sup>1</sup> OJ L 198, 28.7.2017, p. 1–23.

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

<sup>3</sup> Commission Delegated Regulation (EU) No 1061/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household washing machines (OJ L 314, 30.11.2010, p.47).

<sup>4</sup> Commission Directive 96/60/EC of 19 September 1996 implementing Council Directive 92/75/EEC with regard to energy labelling of household combined washer-driers (OJ L 266, 18.10.1996, p. 1).

Article 7 of Regulation (EU) No 1061/2010 states that by December 2014 the Commission should review this Regulation in the light of the technological development and in particular assess the verification tolerances. Directive 96/60/EC on the energy labelling of household washer-driers came into force in 1996 and is still in force.

Household washing machines and household washer-dryers were included as priority products for review in the ecodesign working plan 2016-2019. Household washing machines and household washer-dryers 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 a rescaled label by 2 November 2018. The rescaling exercise should result in replacing the existing range of energy classes of A+++ to G by a range of A to G.

Under Article 11(8) of Regulation (EU) 2017/1369, no products are expected to fall into energy class A when the rescaled label is introduced. It is estimated that it will take at least 10 years for a majority of models to fall into that class.

### **General context**

In 2014, a review study<sup>5</sup> was launched to revise both Regulations on ecodesign and energy labelling of household washing machines and the Directive on labelling of household combined washer-driers. The study, which resulted in a final report published in September 2017, included a stakeholder survey, two stakeholder meetings in 2015 and a web seminar in 2016. It involved approximately 140 stakeholders.

It is estimated that on average 92 % of European households are equipped with a household washing machine and approximately 4 % with a household washer-dryer.

Without further energy efficiency measures, the total electricity consumption of household washing machines and household washer-dryers in the EU is expected to reach 28,7 TWh/year and 2,6 TWh/year, respectively, by 2030. Together this is equivalent to 11 MtCO<sub>2</sub>eq/year. Additionally, the water consumption related to the use of these products is expected to reach 2 200 million m<sup>3</sup> of water in 2030.

There are cost-effective ways of further reducing the energy consumption and emissions related to the usage of household washing machines and household washer-dryers below the level they would reach in a business-as-usual scenario.

The main reasons why these potential savings have not been achieved are the market's failure to:

- (a) provide a better fit between (i) the washing programmes used for testing and optimised by manufacturers and (ii) the main washing programmes actually used by consumers;
- (b) provide a better matching between the usual wash loading by users and the rated capacity or loading adaptation of the household washing machines and household washer-dryers;
- (c) guide consumers to make informed purchase decisions based on the life cycle cost rather than the purchase cost (asymmetric information on costs); and
- (d) provide information and incentives for repairing the appliances and managing properly the products at the end of their use phase.

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<sup>5</sup> Ecodesign and energy label preparatory study on Washing machines and washer-dryers, available at: [http://susproc.jrc.ec.europa.eu/Washing\\_machines\\_and\\_washer\\_dryers/documents.html](http://susproc.jrc.ec.europa.eu/Washing_machines_and_washer_dryers/documents.html)

As a result, potential cost-effective improvements that would benefit the end user are often not implemented.

In this context, the Regulation and the Directive are being revised to trigger a change in market conditions and in the optimisation of appliances on energy and resource efficiency. Another aim is to rescale the label in accordance with Regulation (EU) 2017/1369.

In contrast to a business-as-usual scenario, the proposed revision is expected to reduce the total energy consumption of these products each year across the EU by around 2,5 TWh/year, corresponding to reduced emissions of 0,8 MtCO<sub>2</sub> eq/year, and to reduce water consumption by up to 711 million m<sup>3</sup> per year by 2030. The revision 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 reparability scoring, which is currently being studied<sup>6</sup>.

### **Existing regulation and standards in the EU and third countries**

In addition to the Ecodesign Framework Directive and to the Energy Labelling Regulation, other legislations relevant for household washing machines and household washer-dryers are:

- Regulation (EC) No 1275/2008 on standby and off mode electric power consumption<sup>7</sup>;
- Directive 2014/35/EU on electrical equipment designed for use within certain voltage limits<sup>8</sup>;
- Directive 2014/53/EU on radio equipment<sup>9</sup>;
- Directive 2014/30/EU on electromagnetic compatibility<sup>10</sup>;
- Directive 2012/19/EU on waste electrical and electronic equipment<sup>11</sup>;
- Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment<sup>12</sup>.

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 some sort of legislation on these products.

The performance of household washing machines is tested in accordance with standard EN 60456:2011 that was developed under the mandate M/458 to facilitate the implementation of these Regulations. This standard thoroughly describes the methodology for measuring the washing performance, energy consumption of the main cycle and low power modes, water consumption and duration of the standard washing programmes.

Mandate M/458 also required the development of procedures and methods for measuring the rinsing efficiency of household washing machines. In principle EN 60456:2011 describes a procedure for measuring rinsing efficiency by measuring the remaining alkalinity in the load after the spinning. But it suffers from poor reproducibility and does not allow for comparison of different machines tested in different locations. However, testing methods have progressed

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<sup>6</sup> <http://susproc.jrc.ec.europa.eu/ScoringSystemOnReparability/index.html>

<sup>7</sup> OJ L 339, 18.12.2008, p. 45–52.

<sup>8</sup> OJ L 96, 29.3.2014, p. 357–374.

<sup>9</sup> OJ L 153, 22.5.2014, p. 62–106.

<sup>10</sup> OJ L 96, 29.3.2014, p. 79–106.

<sup>11</sup> OJ L 197, 24.7.2012, p. 38–71.

<sup>12</sup> OJ L 174, 1.7.2011, p. 88–110.

recently and a new method based on the LAS marker is currently available, making it possible to introduce related requirements.

Directive 96/60/EC regulates the energy labelling of household washer-dryers. The performance of household washer-dryers is tested in accordance with EN 50229 that was published in 1997 and modified subsequently to include the changes in EN 60456 and EN 61121. This standard deals with performance criteria including energy and water consumption for the 60°C cotton wash programme as specified in EN 60456 and energy and water consumption of the drying cycle based on EN 61121.

Revised standards would be needed for the implementation of the proposed single Regulation for household washing machines and household washer-dryers.

## **2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT**

There has been extensive consultation of stakeholders during the review studies, and before and after the Consultation Forum meeting. Further external expertise was collected and analysed during this process. The results of the stakeholder consultation are further described in this section.

### **2.1. REVIEW STUDY AND STAKEHOLDER CONSULTATIONS**

In the context of the review of Regulations (EU) No 1015/2010 and (EU) No 1061/2010 an inclusive stakeholder consultation took place, with the aim to gather feedback from a wide audience. The Review Study started in 2015 and was completed in 2017. It followed the structure of the Methodology for Ecodesign of Energy related Products ([MEErP](#))<sup>13</sup>.

The review study covered household washing machines and household washer-dryers in the current scope of the Commission Regulations and Directive. A technical, environmental and economic analysis was performed. This assessed the need of updating the requirements for these products and to assess policy options. This was done as per the review clause of the Regulations, and within the framework of the Ecodesign Directive and Energy Labelling Regulation.

The review study was developed in an open process, taking into account input from relevant stakeholders including manufacturers and their associations, environmental NGOs, consumer organisations and Member States representatives. The study provided a dedicated website and a platform for information interchange (BATIS) where interim results and further relevant materials were published regularly for stakeholder consultation and input. During the study, two face-to-face meetings with stakeholders were held on the 24<sup>th</sup> June 2015 in Seville and 18<sup>th</sup> November 2015 in Brussels and a webinar was held on the 7<sup>th</sup> October 2016. The minutes of these meetings are available at: [http://susproc.jrc.ec.europa.eu/Washing\\_machines\\_and\\_household\\_washer\\_dryers/index.html](http://susproc.jrc.ec.europa.eu/Washing_machines_and_household_washer_dryers/index.html).

### **2.2. WORKING DOCUMENTS AND CONSULTATION FORUM**

The Commission services prepared two Working Documents with ecodesign and energy labelling requirements based on the results of the Review Study. The Working Documents were circulated to the members of the Consultation Forum and for information to the secretariat of the ENVI and ITRE Committees of the European Parliament. The Consultation Forum consists of a balanced representation of MS representatives, industry associations and

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<sup>13</sup> [Kemna, R.B.J., Methodology for the Ecodesign of Energy-related Products \(MEErP\) – Part 2, VHK for the European Commission, 2011 \(MEErP\)](#)

NGOs in line with Article 18 of the Ecodesign Directive. On 18 December 2017, they were discussed in the Consultation Forum meeting.

The Working Documents were circulated before the meeting to the members of the Consultation Forum. More than 20 position papers were received and analysed by the Commission Services before and after the Consultation Forum.

### **2.3. RESULTS OF STAKEHOLDER CONSULTATION DURING AND AFTER THE CONSULTATION FORUM**

The comments of the main stakeholders on key features of the Working Document received during and after the Consultation Forum can be summarised as follows:

**Change of testing programme:** stakeholders were split on the introduction of a requirement on the minimum temperature in laundry core for the testing programme (cotton 40) and for the cotton 60 programme; several Member States were not in favour of this requirement and would prefer a requirement on the maximum duration of testing programmes (time cap) instead; industry stakeholders were against a requirement on the temperature of the cotton 60 programme and against a time cap but the programme duration could be given as indication; consumer organisations and environmental NGOs preferred to have both requirements and, for consumers, that the minimum temperature equals the nominal temperature of programmes.

On the specific case of the **cotton 60 programme**, opinions were also split if this programme was to be considered a hygienisation programme, whether 45 °C was a sufficient temperature and whether there should be such hygienisation programme at all.

**Possible addition of rinsing performance:** several Member States requested the introduction of a new requirement on a minimum rinsing performance, based on the recent development of a new measurement method; industry and standardisation experts are undertaking a series of tests to provide the basis for a scale or for minimum performance; some Member States were considering the possibility of relaxing the requirement on maximum water consumption to enable the achievement of good rinsing performance.

Regarding **water consumption**, it should also be noted that environmental NGOs commented that the proposed revised measure for water consumption was already lax in comparison with the current one, because of the change of testing programme and the calculation formula with inclusion of partial loads.

**On the different loadings to be considered in tests and calculation of the Energy Efficiency Index:** stakeholders were generally welcoming the introduction of small loadings in the index, some Member States preferring a fixed load (for example 2 kg) to the proposed quarter of full load; most Member States and consumer and environmental associations were considering that the weighting factors affecting loadings in the EEI calculation should be revised, the proposed ones continuing or even reinforcing the current bias towards large capacity machines; some Member States proposed to use an exponential factor instead, as proposed by the Commission for tumble dryers.

**On resource efficiency requirements:** Stakeholders were generally in agreement with the requirements proposed on the marking of refrigerating gases and dismantling of electric and electronic equipment, with nuances on the wording, and were split on Commission's proposals for requirements on spare parts and on access to information. Some Member States consider that these requirements will be difficult to enforce by Market Surveillance Authorities and that access to repair and maintenance information should be restricted to authorised repairers

only. Industry (especially manufacturers) concurred on the last point, and was more open on spare parts requirements if they were replaced by declarations. Environmental NGOs and other Member States supported the proposals and/or suggested more ambitious ones.

**On the energy label for household washer-dryers:** stakeholders were generally against the proposal of two labels for household washer-dryers (one for the washing cycle, one for the combined washing and drying cycle) and in favour of one label – for some stakeholders with two energy scales, for others with only one.

## **2.4. OPEN PUBLIC CONSULTATION**

An online public consultation<sup>14</sup> took place from 12 February to 7 May 2018 to collect stakeholders' views on issues such as the expected effect of potential legislative measures on business and on energy consumption trends.

The online public consultation contained a common part on ecodesign and energy labelling, followed by product specific questions on refrigerators, dishwashers, washing machines and washer-dryers, televisions, electronic displays and lighting.

A total of 1 230 responses were received of which 67 % were from consumers and 19 % from businesses (of which three quarters were SMEs and a quarter were large companies). NGOs made up 6 % of respondents and 7 % were 'other' categories. National or local governments accounted for less than 1 % of respondents, and 0,25 % came from national market surveillance authorities.

Participants were predominantly from the UK (41 %) and Germany (26 %), with a second group from Austria, Belgium, France, the Netherlands and Spain representing 17 % of replies. A group of another nine Member States comprised a further 9,5 % of replies, but residents in 12 EU Member States gave either zero or a negligible number of responses. Non-EU respondents comprised around 5 % of replies.

Of the 1 230 respondents, 719 (58 %) replied only to lighting related questions as part of a coordinated campaign related to lighting in theatres. This was considered to significantly distort the replies, and for some questions the 'lighting respondents' were removed from the calculation. Furthermore, as respondents did not have to reply to all questions, a high rate of 'no answer' was observed (from 5 % - up to 90 %), in addition to those who replied 'don't know' or 'no opinion'. To better reflect the actual answers, the number of 'no answers' was deducted and the remaining answers treated as 100%.

### **2.4.1 Overall results**

Some 63 % of participants were in favour of including ecodesign requirements on reparability and durability, and 65 % of respondents considered that this information should feature on the energy labels.

On the reparability of products, participants valued mostly as 'very important' to 'important' (in the range 62 %-68 %) each of the following: a warranty, the availability of spare parts, and a complete manual for repair and maintenance. The delivery time for spare parts was rated as 56 % 'very important' to 'important'.

### **2.4.2 Small and Medium Enterprises (SME)<sup>15</sup> Consultation**

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<sup>14</sup> [https://ec.europa.eu/info/consultations/public-consultation-ecodesign-and-energy-labelling-refrigerators-dishwashers-washing-machines-televisions-computers-and-lamps\\_en](https://ec.europa.eu/info/consultations/public-consultation-ecodesign-and-energy-labelling-refrigerators-dishwashers-washing-machines-televisions-computers-and-lamps_en)

One of the aims of the open public consultation was to gather specific information on role and importance of SMEs on the market and to acquire more knowledge on how SMEs viewed the environmental impacts of these six product groups.

Approximately 10,5 % of replies were from SMEs. SMEs reported that they were aware of the ecodesign and energy label requirements applicable to the products they were involved in. Nevertheless, SMEs mostly declined to respond (90 %) or replied in 'don't know/no opinion' (6 %) when asked about: (i) the potential impact on their businesses per se; (ii) potential impacts on SMEs compared to larger enterprises; and (iii) the introduction of resource efficiency requirements in the revised ecodesign and energy labelling regulations. Of those SMEs who gave an opinion, some 3-4 % considered that the impacts could be negative, and around 1 % thought that the effects would be positive.

### **2.4.3 Responses relating specifically to Household Washing Machines and Household Washer-dryers**

Regarding technical questions on household washing machines and household washer dryers, consumers overall had some awareness (around 30 %) that longer washing programmes tended to promote energy savings. However, the caveat is that around 20 % were not aware of this relationship, and around 50 % overall either gave a "don't know/ no opinion" answer (13 %) or no answer (38 %).

It is important to note that around 45 % considered that the relation between time duration and energy use should both be shown on the Energy Label, and also made more clearly visible on the appliance per se.

Regarding the performance of the household washing machines and the most relevant issues to select the testing programmes, consumers ranked as important or very important (a combined 45 %) the selection of the most frequently-used programmes. Regarding programme duration, low power modes and programme duration, consumers ranked them consistently as 33 % either "important" or "very important", with an additional 10 % ranking them as "somewhat important" (i.e., overall 43 % for "somewhat important" to "very important"). Consumers also considered that the energy consumption, energy efficiency and water consumption were the most relevant parameters to be communicated on the EU Energy Label. A second grouping of quite highly ranked elements that respondents wanted to have on the EU Energy Label included capacity, noise, washing performance and spin-cycle efficiency.

Regarding material efficiency elements, respondents gave the following answers for "important" and "very important" rankings: warranty (45 %), a list of certified repairers (35 %), quick repair time (45 %), spare parts and instructions to enable self-repair (35 %). If the "somewhat important" ranking is included for each of the above elements, this captures in each case an additional 5 %-10 % of respondents.

The two most numerous responses for the expectation of how long spare parts were expected to remain available for household washing machines were: more than 10 years (35 % of respondents), and between 5-10 years (16 %). Fewer than 2,5 % of respondents cited a period of 5 years or less. (8 % "don't know/ no opinion" responses were recorded, and 38 % gave no reply).

## **2.5. CONSUMER SURVEY ON THE ENERGY LABEL**

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<sup>15</sup> SMEs < 250 employees



In addition to the preparatory study and the open public consultation, a specific consumer study<sup>16</sup> was undertaken to inform the Commission on the impact of possible different icons and layouts of the revised energy labels for household washing machines and household washer-dryers on consumer understanding and choices. The survey was administered in seven countries, which together cover 39,7 % of the EU population. In each country, approximately 1 350 respondents completed the survey, nationally representative of each country's population with quotas on age and gender. The survey finalised in July 2018.

A new label layout with several icons representing specific product features was tested.:

- Most of the proposed features are also represented on the current energy labels, namely the energy consumption, water consumption, rated capacity and noise level. However, in this new label the energy and water consumption are indicated per cycle, and are accompanied by an indication of the tested programme.
- Furthermore, the new proposal includes the addition of a new icon representing the duration of the (tested) programme.
- Finally, some icons that are displayed on the current energy labels are no longer part of the new tested label, namely the icons indicating the spinning efficiency.

This study aimed to test consumer responses to:

- consumer understanding of specific icons designed to represent the proposed product features;
- consumer understanding of the full label (e.g. how different elements relate to each other);
- the perceived relevance of the product features proposed to be represented on the proposed new label;
- the extent to which consumers miss information provided in current labels that is not included in the proposed new labels;
- the impact of the labels (relative to other product information) on consumer choice behaviour.

For all features (i.e. water consumption, load capacity, programme duration and noise level) the majority of respondents considered it important that the energy label displays this information.

For water consumption, load capacity, programme duration, and noise level, three icon alternatives were developed and tested. The icons were combined into the energy labels.

The icons and elements of layout retained for the energy label proposal correspond to the icons and features best understood by respondents or, in case of inconclusive results of the survey (for example on noise and programme duration), to the icons and features most consistent with the approach followed for other product groups and the general layout of the label.

## **2.6. IMPACT ASSESSMENT**

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<sup>16</sup> Roxanne van Giesen, Millie Elsen, Thijn van der Linden, Bram Bruisten, Tim Meeusen, Femke Maes, "Study on consumer understanding of draft energy labels for household washing machines, household washer-dryers and household dishwashers", CentERdata., July 2018 commissioned by the EC under No. FWC ENER/C3/2015-631/04

An Impact Assessment is required when the expected economic, environmental and social impacts of EU action are likely to be significant. The Impact Assessment for the review of Commission Regulation (EU) No 1015/2010<sup>17</sup> and Commission Delegated Regulation (EU) No 1061/2010 was carried out between January and April 2018.

The data collected in the review study served as a basis for the impact assessment. Additional data and information was collected and discussed by the Impact Assessment study team with industry and experts representing other stakeholders and Member States. During this process, several meetings were held with industry and Member States experts. The additional data and information collection focused on:

- additional market data, especially the differences between number of models and volume of sales of the energy efficiency classes for the period 2005-2015 for household washing machines and 2012-2015 for household washer dryers;
- fine tuning of the metrics (revised standard).

An Inception Impact Assessment (IIA) "Regulatory measures on the review of Ecodesign requirements for household washing machines and household washer dryers"<sup>18</sup> and the Inception Impact Assessment "Regulatory measure on the reviews of Energy Labelling for household washing machines and household washer dryers" were published before the CF. Feedback on both the above IIAs were received (with 11 and 9 comments, respectively) on a number of aspects. In general, the feedback supported the Ecodesign and Energy Label requirements for household washing machines and household washer dryers as they help mitigate climate change, help EU citizens save their bills, and better integrate domestic appliances on a Circular Economy through the proposed reparability and recyclability requirements.

The submitted feedback commented on the strictness of the Ecodesign requirements regarding energy minimum requirements, the testing programmes, and the low power modes as well as several aspects of the information to be included on the energy label. The feedback also focused on the resource efficiency aspects that are in general strongly supported and some additional proposal were made in order to ensure their proper implementation.

The following options were considered in the impact assessment:

for household washing machines and the washing cycle of household washer-dryers:

- Policy Option WM1: business as usual, used as baseline for the assessment: no further action, the regulations currently in place remain unchanged;
- Policy Option WM2: Combination of Ecodesign requirements and Energy Labelling setting a minimum temperature of 35 degrees;
- Policy Option WM3: Combination of Ecodesign requirements and Energy Labelling setting a maximum duration of the test programme for half or quarter loads to 3 hours while providing information on the full load on the energy label;
- Policy Option WM4: Combination of Ecodesign requirements and Energy Labelling setting a maximum duration of the test programme proportional to the machine capacity;

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<sup>17</sup> Commission Regulation (EU) No 1015/2010 of 10 November 2010 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household washing machines (OJ L 293, 11.11.2010, p. 21–30).

<sup>18</sup> Initiative ARES (2015) 476416 and initiative ARES (2018) 476380

- Policy Option WM5: Combination of Ecodesign requirements on material efficiency related to the end-of-life and reparability aspects including availability of spare parts.

for the combined washing and drying cycle of washer dryers:

- Policy Option WD1: business as usual, used as baseline for the assessment: no further action, the directive currently in place remain unchanged;
- Policy Option WD2: Combination of new low ambition Ecodesign requirements and updated Energy Labelling;
- Policy Option WD3: Combination of new moderately ambitious Ecodesign requirements and updated Energy Labelling;
- Policy Option WD4: Combination of Ecodesign requirements on material efficiency identical to Policy Option WM5.

In all except the business as usual scenarios, the A-G energy label is based on the new test and rescaled.

The preferred option for household washing machines and the wash cycle of household washer-dryers is Policy Option WM 4 with the two tiers on energy efficiency, in combination with the material efficiency requirements of Policy Option WM5. For the combined “wash & dry” function of household washer-dryers the preferred option is Policy Option WD3 with the second tier, in combination with Policy Option WD4. Both options provide the highest overall savings on energy and resources, while ensuring a substantial but realistic contribution to circular economy objectives.

By 2030, the preferred options for household washing machines and washer dryers together are expected to lead to:

- electricity savings of 2,48 TWh/year and water savings of 711 million m<sup>3</sup>/year;
- greenhouse gas emission abatement of 0,84 MtCO<sub>2</sub> eq/year;
- 7,15 billion euros in annual savings for consumers;
- extra business revenue of 1,1 billion euros per year, leading to 3 110 additional jobs in the EU manufacturing sector and 27 940 in the retail sector;
- maintaining EU industry's competitiveness and leading role as high-quality manufacturers;
- promoting innovation for more efficient household washing machines and washer dryers;
- higher revenues and profits for independent companies (such as SMEs) working in the field of reparation and refurbishment of products.

The impact assessment report was submitted to the Commission's regulatory scrutiny board and discussed by the board on 13 June 2018. The Board issued a positive opinion with reservations. The main considerations given by the board, and incorporated in the final version of the Impact Assessment, are the following:

- The report is not sufficiently transparent on the relatively minor importance of the initiative in terms of its contribution to the EU 2030 energy and climate targets.
- The report does not integrate circular economy aspects comprehensively and in a way which is consistent across ecodesign products. It does not impact assess them either.

- In this context, the choice of the preferred option is not sufficiently justified. It is unclear how the report strikes a balance between energy efficiency, circular economy and consumer preferences.
- The report is not sufficiently transparent about the elements that have already been agreed upon and the choices that are left open for political decision.

The impact assessment report was amended to take account of the board's comments. In particular, new sections were added on the 'need to act' and on the 'issues not subject to assessment' and the presentation of the circular economy aspects, of the methodological assumptions and of the preferred option was substantially reinforced.

### **3. LEGAL ELEMENTS OF THE DELEGATED ACT**

#### **3.1. SUMMARY OF THE PROPOSED ACTION FOR ENERGY LABEL REGULATION**

The draft energy label regulation for dishwashers builds on the preferred option identified in the impact assessment report. The objectives to achieve high energy and water savings, to facilitate repair and recycling and make the standard programme more attractive for consumers are balanced with the objectives of maintaining the affordability of products and the competitiveness of industry.

##### Information on the label for both appliances

- (1) Re-scaled label introducing A to G classes in accordance with Regulation (EU) 2017/1369;
- (2) Rated capacity in kg;
- (3) Weighted energy consumption ( $E_c$ ) in kWh per cycle;
- (4) Weighted water consumption ( $W_c$ ) in litres per cycle;
- (5) Programme duration in hh:mm;
- (6) Airborne acoustic noise emissions in dB(A);
- (7) Clear indication that the values refer to the '40-60 eco' programme and for household washer-dryers to the 'wash and dry' programme;
- (8) QR code linking to the product database defined in Article 12 of Regulation (EU) 2017/1369.

#### **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*. Requirements for calculation and measurement methods are laid down in Annex X of the working document.

Following the incorporation into the scope of household washer-dryers and the proposal of new standard cotton programmes, Cenelec should adapt the existing measurement standards that would provide proper measurement methods for all household washing machines and household washer-dryers covered by the scope of the proposed measures.

### **3.3. 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 to the draft revised Energy labelling regulation for household washing machines and household washer-dryers.

The verification tolerances set out in that 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.

### **3.4. 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:

- the improvement potential with regard to energy during the use phase and environmental performance of household washing machines and household washer-dryers;
- the effectiveness of existing measures in realising changes of end-user behaviour in purchasing more energy and resource efficient appliances and using more energy and resource efficient programmes;
- the possibility to introduce measures related to circular economy such as material efficiency, reparability, durability, upgradability and recyclability.

**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 washing machines and household washer-dryers  
and repealing Commission Delegated Regulation (EU) No 1061/2010  
and Commission Directive 96/60/EC**

(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>19</sup>, and in particular Article 11(5) and Article 16 thereof,

Whereas:

- (1) The Ecodesign Working Plan 2016-2019 established by the Commission in application of Article 16(1) of Directive 2009/125/EC sets out the working priorities under the ecodesign and energy labelling framework for the period 2016-2019. The 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 the current regulations.
- (2) Measures from the Working Plan have an estimated potential to deliver a total in excess of 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 washing machines and household washer-dryers are among the product groups listed in the Working Plan, with estimated annual electricity savings of 2,5 TWh, leading to GHG emission reductions of 0,8 MtCO<sub>2</sub> eq/year, and estimated water savings of 711 million m<sup>3</sup> in 2030.
- (3) Provisions on the energy labelling of household washing machines were established by Commission Delegated Regulation (EU) No 1061/2010<sup>20</sup>.
- (4) Provisions on the energy labelling of household washer-dryers were established by Commission Directive 96/60/EC<sup>21</sup>.

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<sup>19</sup> OJ L 198, 28.7.2017, p. 1.

<sup>20</sup> Commission Delegated Regulation (EU) No 1061/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household washing machines (OJ L 314, 30.11.2010, p. 47).

<sup>21</sup> Commission Directive 96/60/EC of 19 September 1996 implementing Council Directive 92/75/EEC with regard to energy labelling of household combined washer-driers (OJ L 266, 18.10.1996, p. 1).

- (5) The Commission has reviewed Regulation (EU) No 1061/2010 pursuant to Article 7 of that Regulation and Directive 96/60/EC and analysed technical, environmental and economic aspects of as well as 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) The review concluded that there was a need for the introduction of revised energy labelling requirements for household washing machines and household washer-dryers, and that both could be established by the same energy labelling Regulation. The scope of this Regulation should thus comprise household washing machines and household washer-dryers.
- (7) The environmental aspects of household washing machines and household washer-dryers, 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).
- (8) It appears from the review that the electricity and water consumption of products subject to this Regulation can be further significantly reduced by implementing energy label measures focusing on better differentiating between products to ensure incentives to suppliers to further improve the energy and resource efficiency of household washing machines and household washer-dryers, and by responding better to the expectations of consumers when using washing or complete washing and drying programmes, as regards their duration in particular.
- (9) 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.
- (10) Taking into account the growth of sales of energy-related products through web-stores and internet sales platforms, rather than directly from suppliers, it should be clarified that hosting 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.
- (11) The measures provided for in this Regulation were discussed by the Consultation Forum in accordance with Articles 14 of Regulation (EU) 2017/1369.
- (12) Regulation (EU) No 1061/2010 and Directive 96/60/EC 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 washing machines and electric mains-operated household washer-dryers including those which are electric mains-operated but can also be powered by batteries, and including built-in household washing machines and built-in household washer-dryers.
2. This Regulation shall not apply to

- (a) washing machines and washer-dryers in the scope of Directive 2006/42/EC of the European Parliament and of the Council<sup>22</sup>;
- (b) battery-operated household washing machines and household washer-dryers that can be connected to the mains through an AC/DC converter purchased separately;
- (c) custom-made household washing machines and household washer-dryers made on a one-off basis and not equivalent to other models.

## *Article 2* **Definitions**

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

- (1) ‘automatic washing machine’ means a washing machine where the load is fully treated by the washing machine without the need for user intervention at any point during the programme;
- (2) ‘household washing machine’ means an automatic washing machine which cleans and rinses household laundry by using water, chemical, mechanical, thermal and electric means, which also has a spin extraction function, and which is declared by the manufacturer in the Declaration of Conformity as complying with Directive 2014/35/EU of the European Parliament and of the Council<sup>23</sup> or with Directive 2014/53/EU of the European Parliament and of the Council<sup>24</sup>;
- (3) ‘household washer-dryer’ means a household washing machine which, in addition to the functions of an automatic washing machine, in the same drum includes a means for drying the textiles by heating and tumbling, and which is declared by the manufacturer in the Declaration of Conformity as complying with Directive 2014/35/EU or with Directive 2014/53/EU;
- (4) ‘built-in household washing machine’ means a household washing machine that is intended to be installed inside an enclosing structure such as a kitchen cupboard;
- (5) ‘built-in household washer-dryer’ means a household washer-dryer that is intended to be installed inside an enclosing structure such as a kitchen cupboard;
- (6) ‘multi-drum household washing machine’ means a household washing machine equipped with more than one drum, whether in separate units or in the same casing;
- (7) ‘point of sale’ means a location where household washing machines or household washer-dryers, or both, are displayed or offered for sale, hire or hire-purchase.

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

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<sup>22</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).

<sup>23</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>24</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).



*Article 3*  
**Obligations of suppliers**

1. Suppliers of household washing machines and household washer-dryers shall ensure that:
  - (a) each household washing machine and household washer-dryer is supplied with a printed label in the format as set out in Annex IV and, for a multi-drum household washing machine, in Annex X;
  - (b) the parameters of the product information sheet, as set out in Annex V, are entered into the product database established by Regulation (EU) 2017/1369;
  - (c) if requested by the dealer of household washing machines and household washer-dryers, the product information sheet shall be made available in printed form;
  - (d) the content of the technical documentation entered into the product database is in accordance with Annex VI;
  - (e) any visual advertisement for a specific model of household washing machine or household washer-dryer, including on the Internet, contains the energy efficiency class and the range of efficiency classes available on the label in accordance with Annex VII;
  - (f) any technical promotional material concerning a specific model of household washing machine or household washer-dryer, including on the Internet, 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 VII;
  - (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 model of household washing machine and of household washer-dryer;
  - (h) an electronic product information sheet as set out in Annex VIII is made available to dealers for each model of household washing machine and of household washer-dryer.
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 III.

*Article 4*  
**Obligations of dealers**

Dealers of household washing machines and household washer-dryers shall ensure that:

- (a) each household washing machine or household washer-dryer, at the point of sale, bears the label provided by suppliers of household washing machines and household washer-dryers in accordance with point (a) of Article 3(1) displayed on the outside on the front or top of the household washing machines or household washer-dryers, in such a way as to be clearly visible;
- (b) in the case of distance selling and sale through the internet, 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 washing machine or household washer-dryer contains the energy efficiency class of that model and the range of efficiency classes available on the label, in accordance with Annex VII;
- (d) any technical promotional material concerning a specific model of household washing machine or household washer-dryer, including on the Internet, 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 VII.

#### *Article 5*

#### ***Obligations of service providers on internet hosting platforms***

Where a hosting service provider as referred to in Article 14 of Directive 2000/31/EC of the European Parliament and of the Council<sup>25</sup> allows the selling of household washing machines or household washer-dryers 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 Annex VIII and shall inform the dealer of the obligation to display them.

#### *Article 6*

#### **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 set out in Annex III.

#### *Article 7*

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

Member States shall apply the procedure laid down in Annex IX to this Regulation when performing the market surveillance checks referred to in Article 8(3) 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 referred to in Article 14 of Regulation (EU) 2017/1369 no later than *[OP – please insert the date - five years after day of entry into force of this Regulation]*.

The review shall in particular assess the following:

- (a) the improvement potential with regard to energy during the use phase and environmental performance of household washing machines and household washer-dryers;

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<sup>25</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 (OJ L 178, 17.7.2000, p. 1).

- (b) the effectiveness of existing measures in realising changes of end-user behaviour in purchasing more energy and resource efficient appliances and using more energy and resource efficient programmes;
- (c) the possibility to introduce measures related to circular economy such as material efficiency, reparability, durability, upgradability and recyclability.

#### *Article 9*

##### **Repeal**

Regulation (EU) No 1061/2010 is repealed with effect from *[OP – please insert the day of entry into force of this Regulation]*.

However, Articles 3, 4, 5 and 6 of Regulation (EU) No 1061/2010 and Annexes I to VII thereto are repealed with effect from 1 April 2021.

Directive 96/60/EC is repealed as with effect from *[OP – please insert the day of entry into force of this Regulation]*.

However, Articles 1, 2 and 3 of Directive 96/60/EC and Annexes I to V thereto are repealed with effect from 1 April 2021.

#### *Article 10*

##### **Transitional measures**

As from *[OP – please insert the day of entry into force of this Regulation]* until 31 March 2021, the product fiche required under Article 3(b) of Regulation (EU) No 1061/2010 may be made available on the product database established by Article 12 of Regulation (EU) 2017/1369 instead of being provided in printed form.

As from *[OP – please insert the day of entry into force of this Regulation]* until 31 March 2021, the fiche required under Article 2(3) of Directive 96/60/EC may be made available on the product database established by Article 12 of Regulation (EU) 2017/1369 instead of being provided in printed form.

#### *Article 11*

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

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

It shall apply from 1 April 2021. However, points (a) and (b) of Article 3(1) 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*



Brussels, **XXX**  
[...](2018) **XXX** draft

ANNEXES 1 to 10

## **ANNEXES**

**to the**

**Commission Delegated Regulation**

**supplementing Regulation (EU) 2017/1369  
of the European Parliament and of the Council with regard to  
energy labelling of household washing machines and household washer-dryers**

**and repealing Commission Delegated Regulation (EU) No 1061/2010  
and Commission Directive 96/60/EC**

## ANNEX I

### Definitions applicable for the annexes

For the purposes of the annexes, the following definitions shall apply:

- (1) 'washing cycle' means a complete washing process as defined by the required programme, consisting of a series of different operations including washing, rinsing, and spinning;
- (2) 'drying cycle' means a complete drying process as defined by the required programme, consisting of a series of different operations including heating and spinning;
- (3) 'complete cycle' means a washing and drying process, consisting of a washing cycle and a drying cycle;
- (4) 'continuous cycle' means a complete cycle without interruption of the process and with no need for user intervention at any point during the programme;
- (5) 'rated capacity' means the maximum mass in kilograms stated by the manufacturer at 0,5 kg intervals of dry textiles of a particular type, which can be treated in one washing cycle of a household washing machine, or in one complete cycle of a household washer-dryer respectively, on the selected programme;
- (6) 'rated washing capacity' means the maximum mass in kilograms stated by the manufacturer at 0,5 kg intervals of dry textiles of a particular type, which can be washed in one washing cycle of a household washing machine, or in one washing cycle of a washer-dryer respectively, on the selected programme;
- (7) 'rated drying capacity' means the maximum mass in kilograms stated by the manufacturer at 0,5 kg intervals of dry textiles of a particular type, which can be dried in one drying cycle of a household washer-dryer on the selected programme;
- (8) 'remaining moisture content' means for household washing machines and for the washing cycle of washer-dryers, the amount of moisture contained in the load at the end of the spinning phase;
- (9) 'final moisture content' means for household washer-dryers the amount of moisture contained in the load at the end of the drying phase;
- (10) 'programme duration' means the length of time beginning with the initiation of the programme selected, excluding any user programmed delay, until an end of programme indicator is activated and the user has access to the load;
- (11) 'off-mode' means a condition in which the equipment is connected to the mains power source and is not providing any function; the following shall also be considered as off mode:
  - (a) a condition providing only an indication of off-mode;
  - (b) a condition providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2014/30/EU<sup>1</sup>;

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<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).

- (12) 'standby mode' means a condition where the equipment is connected to the mains power source and provides only the following functions, which may persist for an indefinite time:
- (a) reactivation function, possibly through network connection, or reactivation function and only an indication of enabled reaction function, and/or
  - (b) information or status display, and/or
  - (c) detection function for emergency measures;
- (13) 'delay start' means a condition in which the equipment automatically starts its main function at a later time as programmed by the user;
- (14) 'display mechanism' means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (15) '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;
- (16) 'tactile screen' means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (17) '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 washing machine and of the washing cycle of a household washer-dryer shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1.

The EEI of a household washing machine and of the washing cycle of a household washer-dryer shall be calculated in accordance with Annex III.

*Table 1*  
*Energy efficiency classes of household washing machines and of the washing cycle of household washer-dryers*

<b>Energy Efficiency Class</b>	<b>Energy Efficiency Index (EEI)</b>
A (most efficient)	$EEI \leq 52$
B	$52 < EEI \leq 60$
C	$60 < EEI \leq 69$
D	$69 < EEI \leq 80$
E	$80 < EEI \leq 91$
F	$91 < EEI \leq 105$
G (least efficient)	$EEI > 105$

The energy efficiency class of the complete cycle of a household washer-dryer shall be determined on the basis of its Energy Efficiency Index (C) as set out in Table 2.

The C of the complete cycle of a household washer-dryer shall be calculated in accordance with Annex III.

*Table 2*  
*Energy efficiency classes of the complete cycle of a household washer-dryer*

<b>Energy Efficiency Class</b>	<b>Energy Efficiency Index (C)</b>
A	$C \leq 37$
B	$37 < C \leq 48$
C	$48 < C \leq 63$
D	$63 < C \leq 76$
E	$76 < C \leq 88$
F	$88 < C \leq 100$
G	$C > 100$

## B. Spin-drying efficiency classes

The spin-drying efficiency class of a household washing machine and of the washing cycle of a household washer-dryer shall be determined on the basis of the remaining moisture content (D) as set out in Table 3.

The D of a household washing machine and of the washing cycle of a household washer-dryer shall be calculated in accordance with Annex III.

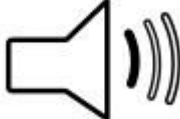


Table 3  
Spin-drying efficiency classes

Spin-drying efficiency class	Remaining moisture content (D) (%)
A (most efficient)	$D < 45$
B	$45 \leq D < 54$
C	$54 \leq D < 63$
D	$63 \leq D < 72$
E	$72 \leq D < 81$
F	$81 \leq D < 90$
G (least efficient)	$D \geq 90$

## C. Acoustic airborne noise emission classes

The acoustic airborne noise emission class of a household washing machine and of the washing cycle of a household washer-dryer shall be determined on the basis of the acoustic airborne noise emissions as set out in Table 4.

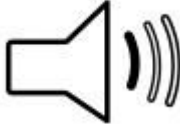

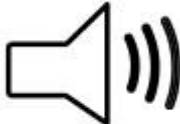
Table 4  
Acoustic airborne noise emission classes

Phase	Acoustic airborne noise emission class	Icon on the label	Noise (dB)
Washing	A	-	$n < 51$
	B	-	$51 \leq n < 57$
	C	-	$n \geq 57$
Spinning	A		$n < 74$
	B		$74 \leq n < 77$
	C		$n \geq 77$

The acoustic airborne noise emission class of a household washer-dryer shall be determined on the basis of the acoustic airborne noise emissions as set out in Table 5.



*Table 5*  
*Acoustic airborne noise emission classes for washer-dryers*

<b>Phase</b>	<b>Acoustic airborne noise emission class</b>	<b>Icon on the label</b>	<b>Noise (dB)</b>
Drying	A		$n < 59$
	B		$59 \leq n < 64$
	C		$n \geq 64$

### ANNEX III

#### Measurement and calculation methods

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.

Numbers shall be rounded in accordance with B.3 Rule B of ISO 80000-1:2009. If the rounding takes place in decimals, the omitted places shall not be filled with zeros.

#### 1. RATED CAPACITY OF WASHER-DRYERS

The rated capacity of washer-dryers shall be measured, using the ‘wash and dry’ complete programme.

If the household washer-dryer provides continuous complete cycles, the rated capacity of the washer-dryer shall be the maximum capacity for this complete cycle.

If the household washer-dryer does not provide continuous complete cycles, the rated capacity of the washer-dryer shall be the lowest value between the maximum capacity of the ‘eco 40-60’ washing cycle (i.e. the rated washing capacity) and the maximum capacity of the drying cycle achieving ‘cupboard dry’ status (i.e. the rated drying capacity).

#### 2. ENERGY EFFICIENCY INDEX

##### 2.1. *Energy Efficiency Index (EEI) of household washing machines and the washing cycle of household washer-dryers*

For the calculation of the EEI, the weighted energy consumption of the ‘eco 40-60’ programme at full, half and quarter loads is compared to its standard energy consumption.

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

$$EEI = (E_t / SCE_C) \times 100$$

where:

$E_t$  is the weighted cycle energy consumption of the household washing machine or the washing cycle of the household washer-dryer;

$SCE_C$  is the standard cycle energy consumption of the household washing machine or the washing cycle of the household washer-dryer.

- (b) The  $SCE_C$  is calculated in kWh per cycle and rounded to three decimal places as follows:

$$SCE_C = -0,0025 \times c^2 + 0,0846 \times c + 0,3920$$

where  $c$  is the rated capacity of the household washing machine or the rated washing capacity of the washer-dryer for the eco 40-60 programme.

- (c) The  $E_t$  is calculated in kWh per cycle as follows and rounded to three decimal places:

$$E_t = A \times E_{t,full} + B \times E_{t,\frac{1}{2}} + C \times E_{t,\frac{1}{4}}$$

where:

$E_{t,full}$  is the energy consumption of the 'eco 40-60' programme at full rated washing capacity and rounded to three decimal places;

$E_{t,1/2}$  is the energy consumption of the 'eco 40-60' programme at half of the rated washing capacity and rounded to three decimal places;

$E_{t,1/4}$  is the energy consumption of the 'eco 40-60' programme at a quarter of the rated washing capacity and rounded to three decimal places;

A is the weighting factor for the full rated washing capacity;

B is the weighting factor for half of the rated washing capacity;

C is the weighting factor for a quarter of the rated washing capacity.

The values of the weighting factors depend on the rated capacity according to the following equations:

$$A = -0,0391 \times c + 0,6918$$

$$B = -0,0109 \times c + 0,3582$$

$$C = 1 - (A + B)$$

where:

c is the rated capacity of the washing machine or the washing rated capacity of the washer dryer.

## 2.2. *Energy Efficiency Index of the complete cycle of household washer-dryers*

For the calculation of the Energy Efficiency Index (C) of a household washer-dryer model, the weighted energy consumption of the 'wash and dry' programme at full and half loads is compared to its standard cycle energy consumption.

- (a) The C is calculated as follows, and is rounded to one decimal place:

$$C = (E_d / S_C) \times 100$$

where:

$E_d$  = weighted cycle energy consumption of the household washer-dryer;

$S_C$  = standard cycle energy consumption of the household washer-dryer.

- (b) The  $S_C$  is calculated in kWh per cycle and rounded to three decimal places as follows:

$$S_C = -0,0502 \times d^2 + 1,1742 \times d - 0,644$$

where d is the rated capacity of the household washer-dryer for the 'wash and dry' programme.

- (c) The weighted energy consumption ( $E_d$ ) is calculated in kWh per cycle as follows and rounded to three decimal places:

$$E_d = \frac{[3 \times E_{d,full} + 2 \times E_{d,1/2}]}{5}$$

where:

$E_{d,full}$  is the energy consumption of the 'wash and dry' programme at full load, i.e. at rated capacity and rounded to three decimal places;

$E_{d,1/2}$  is the energy consumption of the ‘wash and dry’ programme at half load, i.e. at half the rated capacity and rounded to three decimal places.

### 3. WEIGHTED WATER CONSUMPTION

- (1) The weighted water consumption ( $W_t$ ) of a household washing machine or the washing cycle of a household washer-dryer is calculated in litres and rounded to the nearest integer:

$$W_t = (A \times W_{t,full} + B \times W_{t,1/2} + C \times W_{t,1/4})$$

where:

$W_{t,full}$  is the water consumption of the ‘eco 40-60’ programme at rated washing capacity, in litres and rounded to one decimal place;

$W_{t,1/2}$  is the water consumption of the ‘eco 40-60’ programme at half of the rated washing capacity, in litres and rounded to one decimal place;

$W_{t,1/4}$  is the water consumption of the ‘eco 40-60’ programme at a quarter of the rated washing capacity, in litres and rounded to one decimal place;

A, B and C are the weighting factors as described in point 2.1.(c).

- (2) The weighted water consumption ( $W_d$ ) of the ‘wash and dry’ programme of a household washer-dryer is calculated as follows and rounded to the nearest integer:

$$W_d = \frac{[3 \times W_{d,full} + 2 \times W_{d,1/2}]}{5}$$

where:

$W_{d,full}$  is the water consumption of the ‘wash and dry’ programme of a household washer-dryer at rated capacity, in litres and rounded to one decimal place;

$W_{d,1/2}$  is the water consumption of the ‘wash and dry’ programme of a household washer-dryer at half of the rated capacity, in litres and rounded to one decimal place.

### 4. REMAINING MOISTURE CONTENT

The weighted remaining moisture content after washing ( $D$ ) of a household washing machine and the washing cycle of a household washer-dryer is calculated in percentage as follows and rounded to the nearest whole percent:

$$D = \left[ A \times D_{t,full} + B \times D_{t,1/2} + C \times D_{t,1/4} \right]$$

where:

$D_{t,full}$  is the remaining moisture content for the ‘eco 40-60’ programme at rated washing capacity, in percentage and rounded to the nearest whole per cent;

$D_{t,1/2}$  is the remaining moisture content for the ‘eco 40-60’ programme at half of the rated washing capacity in percentage and rounded to the nearest whole per cent;

$D_{t,1/4}$  is the remaining moisture content for the ‘eco 40-60’ programme at a quarter of the rated washing capacity in percentage and rounded to the nearest whole per cent;

A, B and C are the weighting factors as described in point 2.1.(c).

## 5. ACOUSTIC AIRBORNE NOISE EMISSION

The acoustic airborne noise emission of the washing phase and spinning phase of household washing machines and household washer-dryers shall be calculated for the 'eco 40-60' programme at rated washing capacity, 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 rounded at nearest integer.

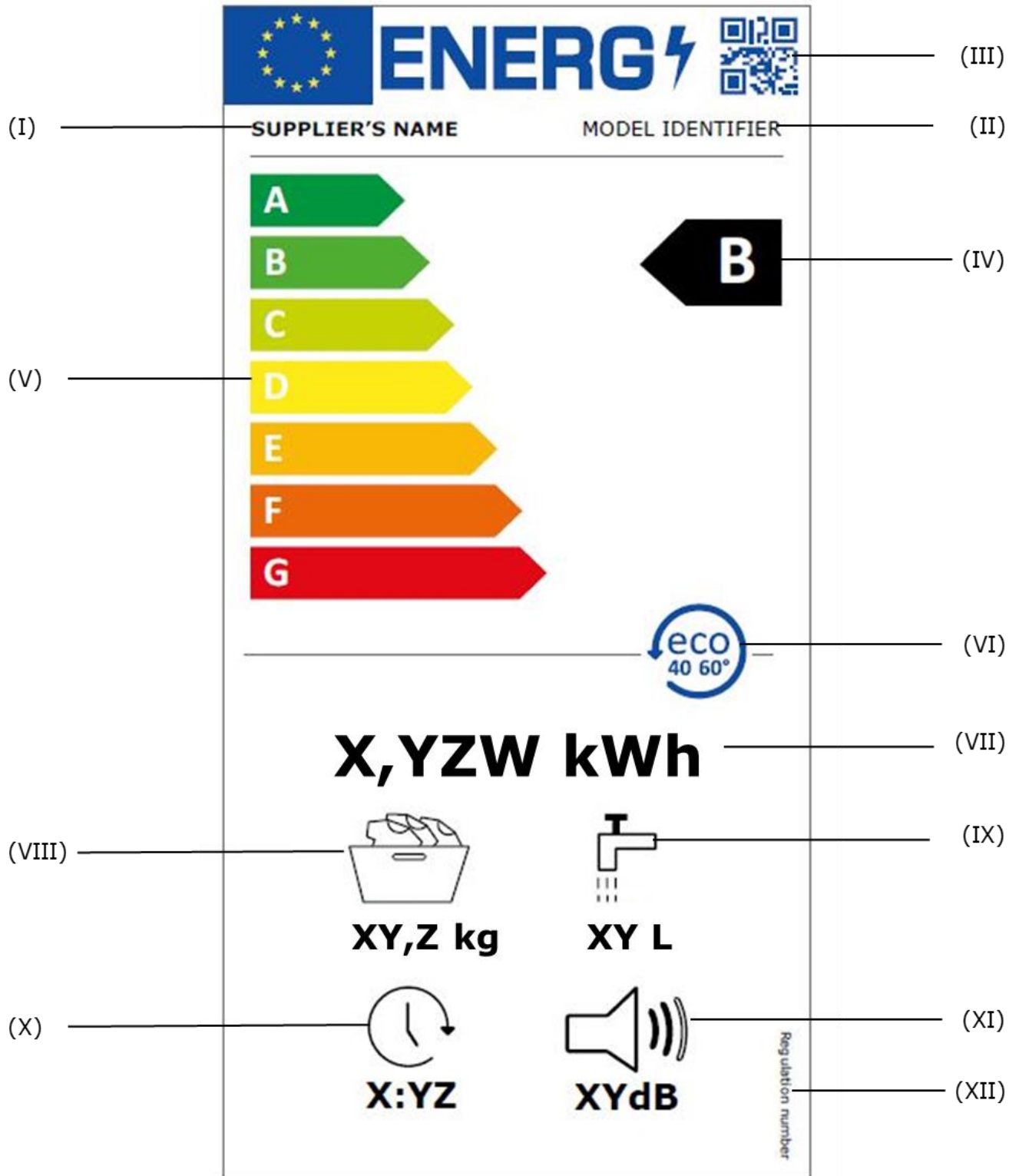
The acoustic airborne noise emission of household washer-dryers shall be calculated for the drying phase of the wash and dry cycle, using harmonised standards the reference numbers of which have been published for this purpose in the Official Journal of the European Union, or other reliable, accurate and reproducible methods, which takes into account the generally recognised state-of-the-art, and rounded at nearest integer.

ANNEX IV

A. Label for household washing machines

1. LABEL FOR HOUSEHOLD WASHING MACHINES

(1) Label

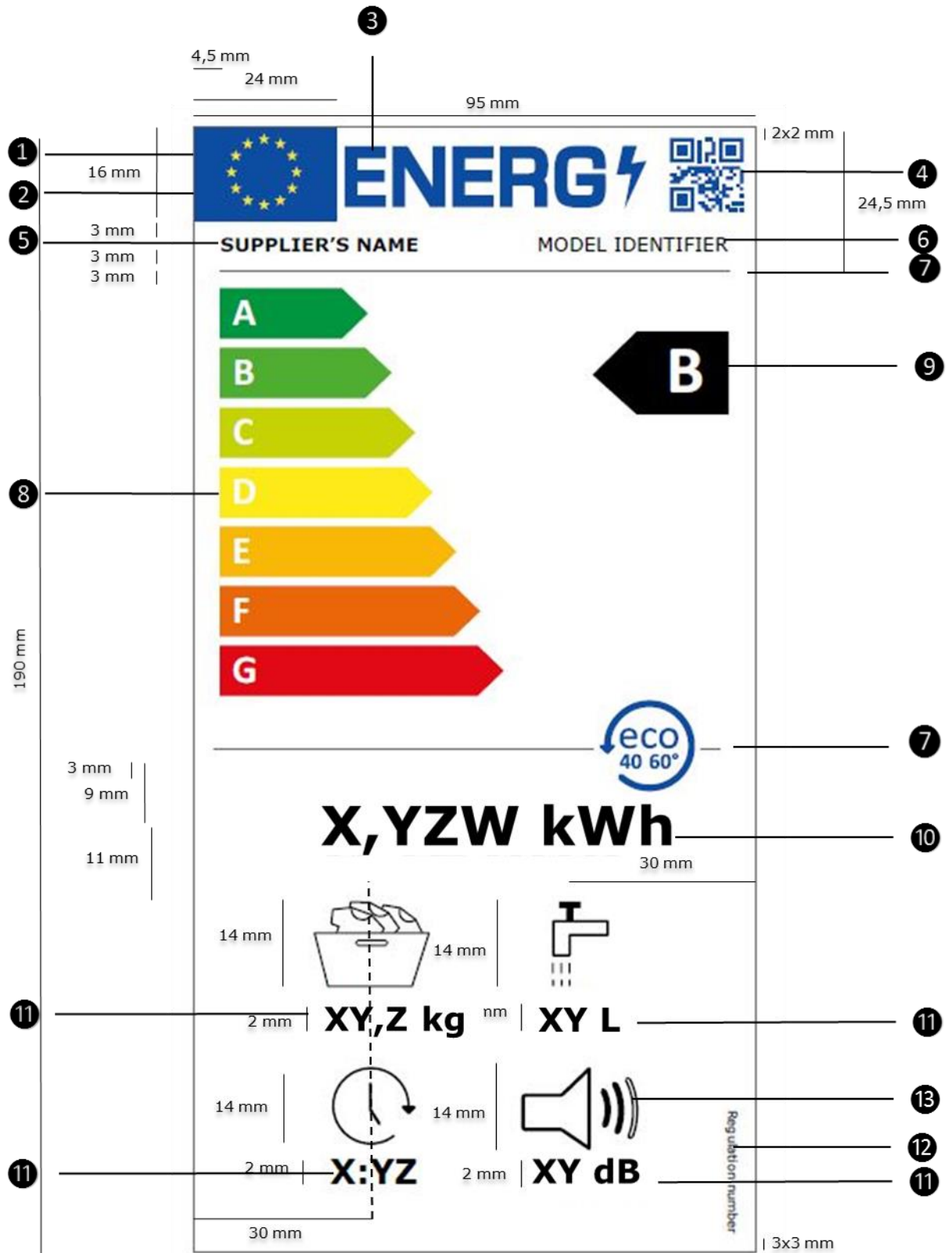


The following information shall be included in the label:

- I supplier's name or trade mark;
- II model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household washing machine model from other models with the same trade mark or supplier's name;
- III QR code linking to the model information in the product database established by Article 12 of Regulation (EU) 2017/1369;
- IV the energy efficiency class determined in accordance with Annex II; the head of the arrow containing the energy efficiency class shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- V scale of energy efficiency classes from A to G;
- VI indication of the 'eco 40-60' programme used to test the washing machine;
- VII weighted energy consumption per cycle ( $E_t$ ) in kWh per cycle, rounded to three decimal places in accordance with Annex III;
- VIII rated capacity, in kg, for the 'eco 40-60' programme;
- IX weighted water consumption per cycle ( $W_t$ ), in litres per cycle, rounded to the nearest integer in accordance with Annex III;
- X duration of the 'eco 40-60' programme at full load in hh:mm rounded to the nearest minute;
- XI airborne acoustic noise emissions of the spinning phase, expressed in dB(A) re 1 pW and rounded to the nearest integer, and airborne acoustic noise emission class of the spinning phase, determined in accordance with point C of Annex II;
- XII reference number of this Regulation

2. LABEL DESIGN FOR HOUSEHOLD WASHING MACHINES

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






Whereby:

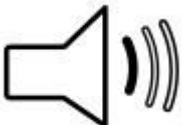


- (a) The background of the label shall be white;
- (b) The single typeface shall be Verdana;
- (c) Colours shall be according to the CMYK – cyan, magenta, yellow and black, colour codes following this example: 0,70,100,0: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black. Black is 0,0,0,100 and white is 0,0,0,0;
- (d) The label shall fulfil all the following requirements (numbers refer to the numbers in the black bullets in the figure above):
  - (1) the border of the label shall have weight of 1 pt;
  - (2) the colour of the background of the EU logo shall be 100,80,0,0 and the colour of the stars shall be 0,0,100,0;
  - (3) the colour of the energy logo shall be 100,80,0,0;
  - (4) the colour of the QR code shall be 100,80,0,0;
  - (5) the supplier’s name shall be in colour black in font bold, 9 pt;
  - (6) the model identifier shall be in colour black in font regular, 9 pt;
  - (7) the dividers shall be 86 mm wide and have a weight of 1 pt. The colour of the divider shall be black;
  - (8) the A to G scale shall be as follows:
    - the colour of the letter indicating energy rating scale shall be white and the font bold, 19 pt;
    - dimensions and colours of the energy rating scale shall be as follows:

Rating scale and class	Colours (CMYK)
<p>D: 36 mm C: 33 mm B: 29 mm A: 23 mm</p> <p>1,5 mm 1,5 mm 1,5 mm 1,5 mm 1,5 mm 1,5 mm</p> <p>69 mm</p> <p>A B C D E F G</p> <p>G: 48 mm F: 44 mm E: 40 mm</p>	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

- (9) the energy efficiency class shall be as follows:
- the rating scale arrow and the energy efficiency class arrow shall be aligned;
  - dimensions and colour shall be as follows:

Rating scale and class	Colours (CMYK)
	<p>The arrow: 0,0,0,100 (black)</p> <p>The letter: 0,0,0,0 (white)</p> <p>The letter font: bold, 33 pt</p>

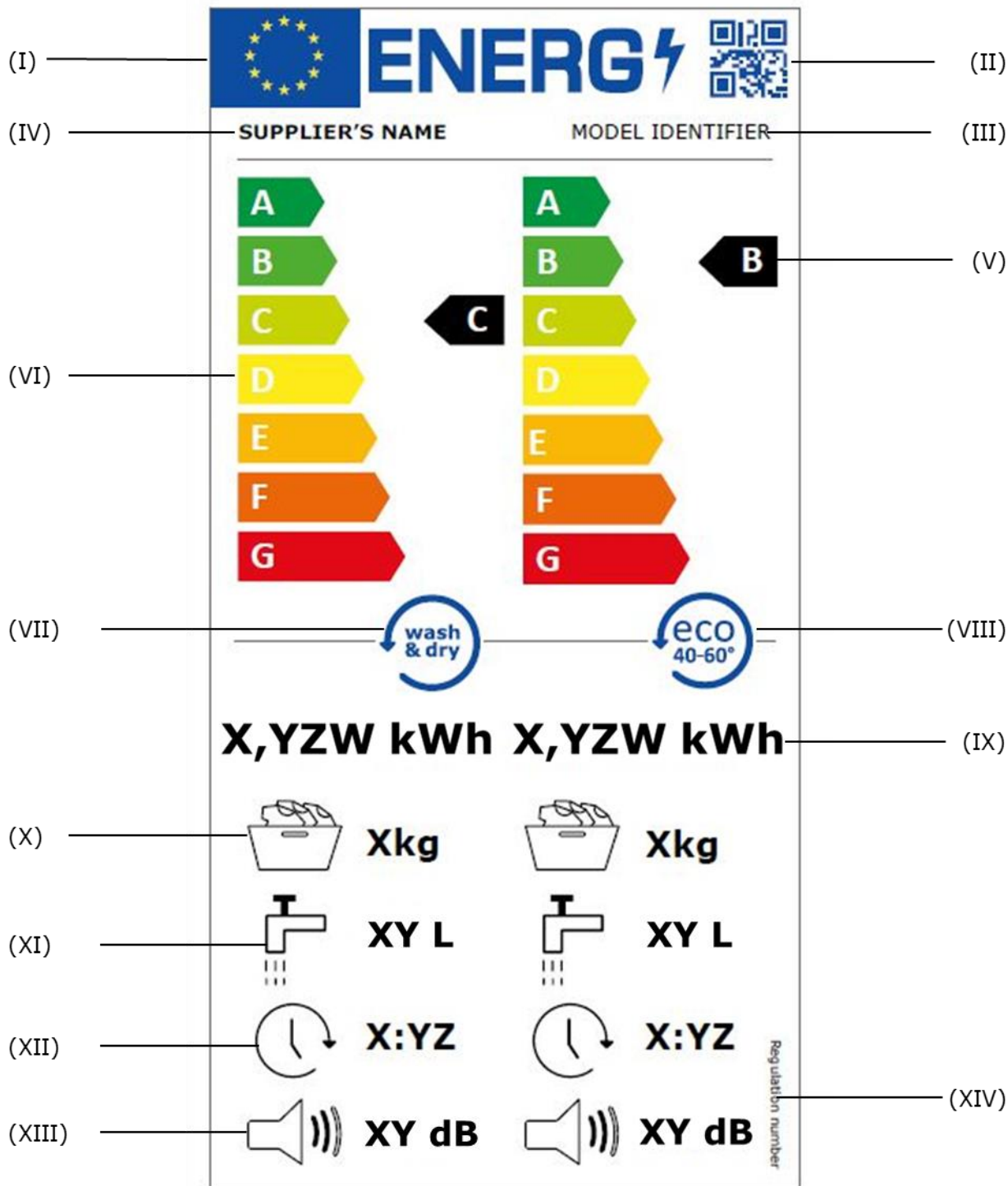
- (10) the  $E_t$  and kWh shall be in colour black and font bold, 26 pt;
- (11) the rated capacity,  $W_t$ , programme duration, airborne acoustic noise emissions and corresponding units shall be in colour black and font bold, 16 pt;
- (12) the Regulation number shall be in colour black and font bold, 6 pt;
- (13) the airborne acoustic noise emissions logo shall be one of the three following logos in colour black, determined in accordance with point B of Annex II:

Acoustic airborne noise emission class	A	B	C
Logo			

## B. Label for household washer-dryers

### 1. LABEL FOR HOUSEHOLD WASHER-DRYERS

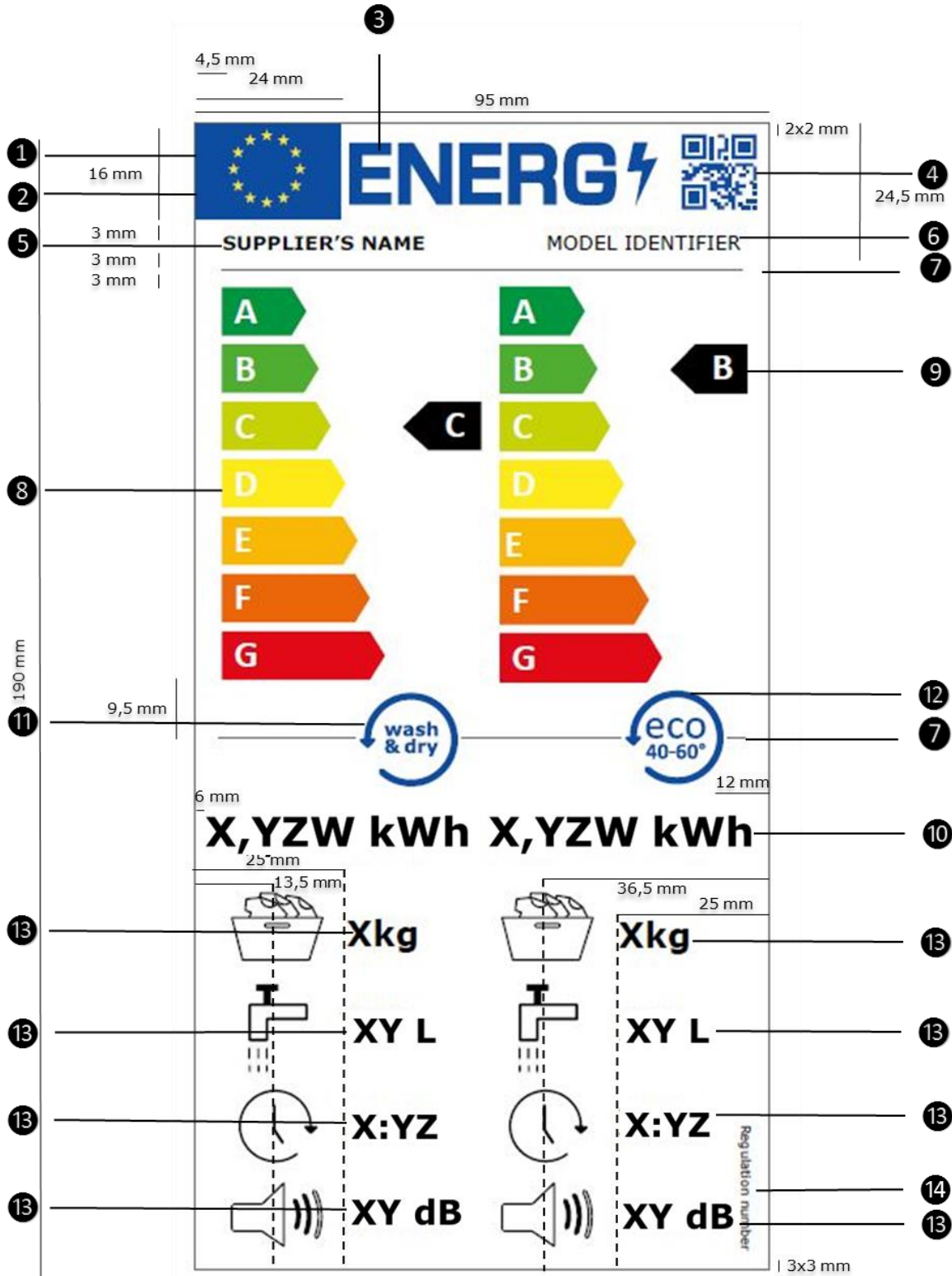
(1) Label:



The following information shall be included in the label:

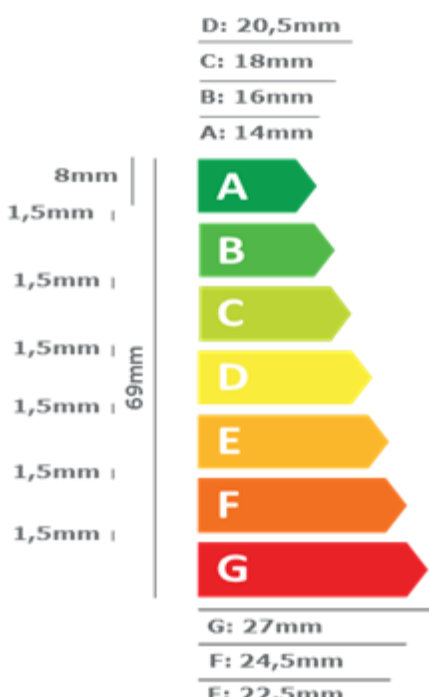
- I EU and energy logos;
- II QR code linking to the model information in the product database established by Article 12 of Regulation (EU) 2017/1369;
- III model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household washer-dryer model from other models with the same trade mark or supplier's name;
- IV supplier's name or trade mark;
- V the energy efficiency class for the washing cycle (on the right side) determined in accordance with Annex II; the head of the arrow containing the energy efficiency class shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- VI the energy efficiency class for the complete cycle (on the left side) determined in accordance with Annex II; the head of the arrow containing the energy efficiency class shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;
- VII indication of the 'wash and dry' cycle used to test the complete cycle (on the left side) and
- VIII indication of the 'eco 40-60' programme used to test the washing cycle of the washer-dryer (on the right side);
- IX weighted energy consumption per cycle in kWh per cycle, rounded to three decimal places in accordance with Annex III, for the complete cycle ( $E_t$ , on the left side); and for the washing cycle ( $E_d$ , on the right side);
- X rated capacity for the complete cycle (on the left side); and for the washing cycle (on the right side);
- XI weighted water consumption per cycle ( $W_t$ ), in litres per cycle, rounded to the nearest integer in accordance with Annex III, for the complete cycle (on the left side); and for the washing cycle ( $W_d$ , on the right side);
- XII duration of the test programme at full rated capacity for the complete cycle (on the left side); and at full rated washing capacity for the washing cycle (on the right side);
- XIII airborne acoustic noise emission class of the drying phase of the 'wash and dry' cycle, with value in dB(A) re 1 pW and rounded to the nearest integer (on the left side); and airborne acoustic noise emission class of the spinning phase of the 'eco 40-60' programme, with value in dB(A) re 1 pW and rounded to the nearest integer (on the right side);
- XIV reference number of this Regulation.

2. LABEL DESIGN FOR HOUSEHOLD WASHER-DRYERS




Whereby:

- (a) The background of the label shall be white;
- (b) The single typeface shall be Verdana;
- (c) Colours shall be according to the CMYK – cyan, magenta, yellow and black, colour codes following this example: 0,70,100,0: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black. Black is 0,0,0,100 and white is 0,0,0,0;
- (d) The label shall fulfil all the following requirements (numbers refer to the numbers in the black bullets in the figure above):
  - (1) the border of the label shall have weight of 1 pt;
  - (2) the colour of the background of the EU logo shall be 100,80,0,0 and the colour of the stars shall be 0,0,100,0;
  - (3) the colour of the energy logo shall be 100,80,0,0;
  - (4) the colour of the QR code shall be 100,80,0,0;
  - (5) the supplier’s name shall be in colour black in font bold, 9 pt;
  - (6) the model identifier shall be in colour black in font regular, 9 pt;
  - (7) the dividers shall be 86 mm wide and have a weight of 1 pt. The colour of the divider shall be black;
  - (8) the A to G scales shall be as follows:
    - the colour of the letter indicating energy rating scale shall be white and the font bold, 19 pt;
    - dimensions and colours of the energy rating scale shall be as follows:

Rating scale and class	Colours (CMYK)
	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

- (9) Each of the energy efficiency classes (C and EEI) shall be as follows:
- the rating scale arrow and the energy efficiency class arrow shall be aligned;
  - dimensions and colour shall be as follows:

Rating scale and class	Colours (CMYK)
	<p>The arrow: 0,0,0,100 (black)</p> <p>The letter: 0,0,0,0 (white)</p> <p>The letter font: bold, 33 pt</p>

(10) the  $E_t$ ,  $E_d$  and kWh shall be in colour black and font bold, 26 pt;

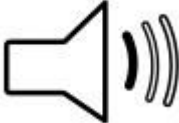

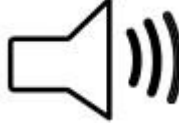
(11) the wash & dry indicator shall be as follows:

- the colour shall be 100,80,0,0;
- the circular arrows shall 16 mm large on 15,3 mm high;
- the letters ‘wash & dry’ shall be Verdana bold, 9 pt;

(12) the eco 40-60 programme indicator shall be as follows:

- the colour shall be 100,80,0,0;
- the circular arrows shall 16 mm large on 15,3 mm high;
- the letters ‘eco’ shall be in Verdana bold, 13 pt;
- the figures ‘40-60’ shall be in Verdana bold, 8 pt;

(13) the rated capacities,  $W_t$  and  $W_d$ , programme durations, airborne acoustic noise emissions and corresponding units shall be in colour black and font bold, 16 pt; Each of the airborne acoustic noise emissions logos shall be one of the three following logos in colour black, determined in accordance with point B of Annex II:

Acoustic airborne noise emission class	A	B	C
Logo			

(14) the Regulation number shall be in colour black and font bold, 6 pt.

*ANNEX V*  
**Product information sheet**

1. The information in the product information sheet of household washing machines shall include the following:
  - (a) supplier's name or trade mark;
  - (b) supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household washing machine or household washer-dryer model from other models with the same trade mark or supplier's name;
  - (c) indication that the 'eco 40-60' programme is the washing programme to which the information on the label and the product information sheet relates, that this programme is suitable to clean normally soiled cotton laundry declared to be washable at 40 °C or 60 °C, together in the same cycle;
  - (d) rated washing capacity in kg for the 'eco 40-60' programme;
  - (e) energy efficiency class determined in accordance with Annex II;
  - (f) weighted energy consumption ( $E_t$ ) per cycle in kWh per cycle, rounded to three decimal places; it shall be described as: 'Energy consumption "X,YZW" kWh per cycle, for the 'eco 40-60' programme at a combination of full and partial loads. Actual energy consumption will depend on how the appliance is used';
  - (g) the programme duration of the 'eco 40-60' programme at full, half and quarter loads in hours:minutes and rounded to the nearest minute;
  - (h) weighted water consumption ( $W_t$ ) in litres per cycle, rounded to the nearest integer; it shall be described as: 'Water consumption "XY" litres per cycle, for the 'eco 40-60' programme at a combination of full and partial loads. Actual water consumption will depend on how the appliance is used and on the hardness of the water';
  - (i) maximum temperature reached for minimum 5 minutes inside the laundry during the 'eco 40-60' programme at full, half and quarter loads, in °C and rounded to the nearest integer;
  - (j) spin-drying efficiency class determined in accordance with Annex II, expressed as 'spin-drying efficiency class "X" on a scale from G (least efficient) to A (most efficient)'; this may be expressed by other means provided it is clear that the scale is from G (least efficient) to A (most efficient);
  - (k) maximum spin speed attained for the 'eco 40-60' programme at full, half or quarter loads, whichever is the lower;
  - (l) remaining moisture content after washing for the 'eco 40-60' programme at full, half or quarter loads, whichever is the greater;
  - (m) airborne acoustical noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer during the washing and spinning phases for the 'eco 40-60' programme at rated washing capacity;
  - (n) airborne acoustical noise emissions class for the washing and spinning phases for the 'eco 40-60' programme at rated washing capacity in accordance with Annex II;
  - (o) an indication, whether the household washing machine is intended to be installed as free-standing or built-in;



- (p) the date (day, month, year) of most recent update of the information;
  - (q) the date (month, year) when the first product of the model was placed on the EU market;
  - (r) the date (month, year) when the last product of the model was placed on the EU market (where relevant);
  - (s) time period during which the spare parts necessary for the use of the household washing machine are available.
2. The information in the product information sheet of household washer-dryers shall include the following:
- (a) supplier's name or trade mark;
  - (b) supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household washing machine or household washer-dryer model from other models with the same trade mark or supplier's name;
  - (c) indication that the 'wash and dry' programme is the complete washing and drying cycle to which the information on the label and the product information sheet relates, that this programme is a combination of the 'eco 40-60' programme for the washing cycle and a drying cycle drying the laundry to 'cupboard dry' status;
  - (d) rated washing capacity in kg for the washing cycle and rated capacity of the washer-dryer for the 'wash and dry' programme;
  - (e) energy efficiency classes of the washing cycle and of the complete cycle determined in accordance with Annex III;
  - (f) weighted energy consumption ( $E_t$ ) per cycle in kWh per kg, rounded to three decimal places, for the washing cycle of the washer-dryer; it shall be described as: 'Energy consumption "X,YZW" kWh per kg per cycle, for the washing cycle of the washer-dryer, using the 'eco 40-60' programme at a combination of full and partial loads. Actual energy consumption will depend on how the appliance is used';
  - (g) weighted energy consumption ( $E_d$ ) per cycle in kWh per kg, rounded to three decimal places, for the complete cycle of the washer-dryer; it shall be described as: 'Energy consumption "X,YZW" kWh per kg per cycle, for the complete washing and drying cycle of the washer-dryer, using the 'wash and dry' programme at a combination of full and half loads. Actual energy consumption will depend on how the appliance is used';
  - (h) the duration of the 'eco 40-60' washing cycle at full, half and quarter loads in hours:minutes and rounded to the nearest minute;
  - (i) the duration of the 'wash and dry' cycle at full and half loads in hours:minutes and rounded to the nearest minute;
  - (j) weighted water consumption ( $W_t$ ) in litres per cycle, rounded to the nearest integer, for the 'eco 40-60' washing cycle; it shall be described as: 'Water consumption "XY" litres per cycle, for the 'eco 40-60' programme at a combination of full and partial loads. Actual water consumption will depend on how the appliance is used and on the hardness of the water';

- (k) weighted water consumption ( $W_d$ ) in litres per cycle, rounded to the nearest integer, for the 'wash and dry' programme; it shall be described as: 'Water consumption "XY" litres per cycle, for the complete washing and drying cycle of the washer-dryer at a combination of full and half loads. Actual water consumption will depend on how the appliance is used and on the hardness of the water';
- (l) maximum temperature reached for minimum 5 minutes inside the laundry during the 'eco 40-60' programme at full, half and quarter loads, in °C and rounded to the nearest integer;
- (m) spin-drying efficiency class of the washing cycle determined in accordance with Annex II, expressed as 'spin-drying efficiency class "X" on a scale from G (least efficient) to A (most efficient)'; this may be expressed by other means provided it is clear that the scale is from G (least efficient) to A (most efficient);
- (n) maximum spin speed attained for the 'eco 40-60' washing cycle at full, half or quarter loads, whichever is the lower;
- (o) remaining moisture content after washing for the 'eco 40-60' washing cycle at full, half or quarter loads, whichever is the greater;
- (p) airborne acoustic noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer during the washing and spinning phases for the 'eco 40-60' washing cycle at full rated washing capacity;
- (q) airborne acoustic noise emissions expressed in dB(A) re 1 pW and rounded to the nearest integer during the drying phase for the 'wash and dry' cycle at rated capacity;
- (r) airborne acoustical noise emissions class for the washing and spinning phases for the 'eco 40-60' programme at rated washing capacity in accordance with Annex II;
- (s) airborne acoustical noise emissions class for drying phase for the 'wash and dry' cycle at rated capacity in accordance with Annex II;
- (t) an indication, whether the household washer-dryer is intended to be installed as free-standing or built-in;
- (u) the date (day, month, year) of most recent update of the information;
- (v) the date (month, year) when the first product of the model was placed on the EU market;
- (w) the date (month, year) when the last product of the model was placed on the EU market (where relevant);
- (x) time period during which the spare parts necessary for the use of the household dishwasher are available.

*ANNEX VI*  
**Technical documentation**

1. For a washing machine, the technical documentation referred to in Article 3(1)(d) shall include:
  - (a) identification and signature of the person empowered to bind the supplier;
  - (b) information as set out in point 1 of Annex V;
  - (c) information as set out in Table 6;

*Table 6*  
*Information to be included in the technical documentation for washing machines*

PARAMETER	UNIT	VALUE
Rated capacity for the Eco 40-60 programme, at 0,5 kg intervals (c)	kg	X,X
Energy consumption of the Eco 40-60 programme at full load ( $E_{t,full}$ )	kWh/cycle	X,XXX
Energy consumption of the Eco 40-60 programme at half load ( $E_{t,1/2}$ )	kWh/cycle	X,XXX
Energy consumption of the Eco 40-60 programme at quarter load ( $E_{t,1/4}$ )	kWh/cycle	X,XXX
Weighted energy consumption of the Eco 40-60 programme ( $E_t$ )	kWh/cycle	X,XX
Standard energy consumption of the Eco 40-60 programme ( $SCE_C$ )	kWh/cycle	X,XX
Energy Efficiency Index (EEI)	-	XX,X
Water consumption of the Eco 40-60 programme at full load ( $W_{t,full}$ )	L/cycle	X,X
Water consumption of the Eco 40-60 programme at half load ( $W_{t,1/2}$ )	L/cycle	X,X
Water consumption of the Eco 40-60 programme at quarter load ( $W_{t,1/4}$ )	L/cycle	X,X
Weighted water consumption ( $W_t$ )	L/cycle	X,X
Washing efficiency index of the Eco 40-60 programme at full load ( $I_w$ )	-	X,XX
Washing efficiency index of the Eco 40-60 programme at half load ( $I_w$ )	-	X,XX

Washing efficiency index of the Eco 40-60 programme at quarter load ( $I_w$ )	-	X,XX
Rinsing efficiency of the Eco 40-60 programme at full load ( $I_R$ )	mg/g	X,X
Rinsing efficiency of the Eco 40-60 programme at half load ( $I_R$ )	mg/g	X,X
Rinsing efficiency of the Eco 40-60 programme at quarter load ( $I_R$ )	mg/g	X,X
Programme duration of the Eco 40-60 programme at full load ( $t_w$ )	h:min	X:XX
Programme duration of the Eco 40-60 programme at half load ( $t_w$ )	h:min	X:XX
Programme duration of the Eco 40-60 programme at quarter load ( $t_w$ )	h:min	X:XX
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at full load (T)	°C	XX
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at half load (T)	°C	XX
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at quarter load (T)	°C	XX
Weighted remaining moisture content (D)	%	XX
Airborne acoustical noise emissions during eco 40-60 programme (washing phase)	dB(A) re 1 pW	XX
Airborne acoustical noise emissions during eco 40-60 programme (spinning phase)	dB(A) re 1 pW	XX
Power consumption in 'off-mode' ( $P_o$ )	W	X,XX
Power consumption in 'standby mode' ( $P_{sm}$ )	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	W	X,XX
Power consumption in 'delay start' ( $P_{ds}$ )	W	X,XX

- (d) where appropriate, the references of the harmonised standards applied;
- (e) where appropriate, the other technical standards and specifications used;

- (f) the calculations and the results of calculations performed in accordance with Annex III.
2. For a washer-dryer, the technical documentation referred to in Article 3(1)(d) shall include:
- (a) identification and signature of the person empowered to bind the supplier;
  - (b) information as set out in point 2 of Annex V;
  - (c) information as set out in Table 7;

*Table 7  
Information to be included in the technical documentation for washer-dryers*

PARAMETER	UNIT	VALUE
Rated capacity for the washing cycle, at 0,5 kg intervals (c)	kg	X,X
Rated capacity for the wash and dry cycle, at 0,5 kg intervals (d)	kg	X,X
Energy consumption of the Eco 40-60 programme at full rated washing capacity ( $E_{t,full}$ )	kWh/cycle	X,XXX
Energy consumption of the Eco 40-60 programme at half of the rated washing capacity ( $E_{t,1/2}$ )	kWh/cycle	X,XXX
Energy consumption of the Eco 40-60 programme at a quarter of the rated washing capacity ( $E_{t,1/4}$ )	kWh/cycle	X,XXX
Weighted energy consumption of the Eco 40-60 programme ( $E_t$ )	kWh/cycle	X,XX
Standard energy consumption of the Eco 40-60 programme ( $SCE_C$ )	kWh/cycle	X,XX
Energy Efficiency Index of the washing cycle (EEI)	-	XX,X
Energy consumption of the wash and dry cycle at full load ( $E_{d,full}$ )	kWh/cycle	X,XXX
Energy consumption of the wash and dry cycle at half load ( $E_{d,1/2}$ )	kWh/cycle	X,XXX
Weighted energy consumption of the wash and dry cycle ( $E_d$ )	kWh/cycle	X,XX
Standard energy consumption of the wash and dry cycle ( $S_C$ )	kWh/cycle	X,XX
Energy Efficiency Index of the wash and dry cycle (C)	-	XX,X

Water consumption of the Eco 40-60 programme at rated washing capacity ( $W_{t,full}$ )	L/cycle	X,X
Water consumption of the Eco 40-60 programme at half of the rated washing capacity ( $W_{t,1/2}$ )	L/cycle	X,X
Water consumption of the Eco 40-60 programme at a quarter of the rated washing capacity ( $W_{t,1/4}$ )	L/cycle	X,X
Weighted water consumption of the washing cycle ( $W_t$ )	L/cycle	X,X
Water consumption of the wash and dry cycle at full load ( $W_{d,full}$ )	L/cycle	X,X
Water consumption of the wash and dry cycle at half load ( $W_{d,1/2}$ )	L/cycle	X,X
Weighted water consumption of the wash and dry cycle ( $W_d$ )	L/cycle	X,X
Washing efficiency index of the Eco 40-60 programme at full load ( $I_w$ )	-	X,XX
Washing efficiency index of the Eco 40-60 programme at half load ( $I_w$ )	-	X,XX
Washing efficiency index of the Eco 40-60 programme at quarter load ( $I_w$ )	-	X,XX
Washing efficiency index of the wash and dry cycle at full load ( $J_w$ )	-	X,XX
Washing efficiency index of the wash and dry cycle at half load ( $J_w$ )	-	X,XX
Rinsing efficiency of the Eco 40-60 programme at full load ( $I_R$ )	mg/g	X,X
Rinsing efficiency of the Eco 40-60 programme at half load ( $I_R$ )	mg/g	X,X
Rinsing efficiency of the Eco 40-60 programme at quarter load ( $I_R$ )	mg/g	X,X
Rinsing efficiency of the wash and dry cycle at full load ( $J_R$ )	mg/g	X,X
Rinsing efficiency of the wash and dry cycle at half load ( $J_R$ )	mg/g	X,X
Programme duration of the Eco 40-60 programme at	h:min	X:XX

full load ( $t_w$ )		
Programme duration of the Eco 40-60 programme at half load ( $t_w$ )	h:min	X:XX
Programme duration of the Eco 40-60 programme at quarter load ( $t_w$ )	h:min	X:XX
Programme duration of the wash and dry cycle at full load ( $t_d$ )	h:min	X:XX
Programme duration of the wash and dry cycle at half load ( $t_d$ )	h:min	X:XX
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at full load (T)	°C	XX
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at half load (T)	°C	XX
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at quarter load (T)	°C	XX
Weighted remaining moisture content after washing (D)	%	XX
Final moisture content after drying	%	X,X
Airborne acoustical noise emissions during eco 40-60 programme (washing phase)	dB(A) re 1 pW	XX
Airborne acoustical noise emissions during eco 40-60 programme (spinning phase)	dB(A) re 1 pW	XX
Airborne acoustical noise emissions (drying phase of the wash and dry cycle)	dB(A) re 1 pW	XX
Power consumption in 'off-mode' ( $P_o$ )	W	X,XX
Power consumption in 'standby mode' ( $P_{sm}$ )	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	W	X,XX
Power consumption in 'delay start' ( $P_{ds}$ )	W	X,XX

- (d) where appropriate, the references of the harmonised standards applied;
- (e) where appropriate, the other technical standards and specifications used;

- (f) the calculations and the results of calculations performed in accordance with Annex III.



3. Where the information included in the technical documentation for a particular household washing machine or household washer-dryer model has been obtained:
- from an equivalent model of the same or a different manufacturer, or
  - by calculation on the basis of design or extrapolation from another model of the same or a different manufacturer, or both,

the technical documentation shall include, as appropriate, a list of the all equivalent household washing machine or washer-dryer models, the details of such calculation, the assessment undertaken by manufacturers to verify the accuracy of the calculation and, where appropriate, the declaration of identity between the models of different manufacturers.

## ANNEX VII

### Information to be provided in visual advertisements, in promotional material, in distance selling except distance selling on the internet

1. In visual advertisements for washing machines, for the purposes of ensuring conformity with the requirements laid down in Article 3(1)(e) and Article 4(c), the energy class and the range of efficiency classes available on the label shall be shown with an arrow matching the letter of the energy class, as indicated in Figure 1.

In visual advertisements for washer-dryers, for the purposes of ensuring conformity with the requirements laid down in Article 3(1)(e) and Article 4(c), the energy classes of the washing cycle and of the complete cycle available on the label and the range of efficiency classes, shall be shown with two arrows matching the letters of the energy classes, as indicated in Figure 2.

2. In promotional material for washing machines, for the purposes of ensuring conformity with the requirements laid down in Article 3(1)(f) and Article 4(d), the energy class and the range of efficiency classes available on the label shall be shown with an arrow matching the letter of the energy class, as indicated in Figure 1.

In promotional material, for the purposes of ensuring conformity with the requirements laid down in Article 3(1)(f) and Article 4(d), the energy classes of the washing cycle and of the complete cycle available on the label and the range of efficiency classes, shall be shown with two arrows matching the letters of the energy classes, as indicated in Figure 2.

3. Any paper based distance selling of washing machines must show the energy class and the range of efficiency classes available on the label with an arrow matching the letter of the energy class, as indicated in Figure 1.

Any paper based distance selling of washer-dryers must show the energy classes of the washing cycle and of the complete cycle available on the label and the range of efficiency classes, with two arrows matching the letters of the energy classes, as indicated in Figure 2.

4. Telemarketing based distance selling must specifically inform the customer of the energy classes of the product and of 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 by requesting a printed copy.



*Figure 1: Coloured arrow example for washing machines, with range of energy classes indicated*



***Figure 2: Coloured arrows example for washer-dryers (complete cycle on the left side, washing cycle on the right side), with range of energy classes indicated***

For all the situations mentioned in points 1 to 4, it must be possible for the customer to access the full label and the product information sheet through a link to the product database website, or to request a printed copy.

## ANNEX VIII

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

1. The appropriate label made available by suppliers in accordance with Article 3(1)(g), with the information required under Annex IV, 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 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 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 shall:

- (a) be one or two arrow(s) in the colour corresponding to the energy efficiency class(es) of the product on the label;
- (b) indicate on the arrow(s) the energy efficiency class(es) of the product in white in a font size equivalent to that of the price; and
- (c) for a washing machine, have one of the following two formats:



for a washer-dryer, have one of the following formats for the complete cycle:



and one of the following formats for the washing cycle:



3. In the case of nested display, the sequence of display of the label shall be as follows:
  - (a) the images 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 images 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 classes of the product in a font size equivalent to that of the price.
4. The appropriate product information sheet made available by suppliers in accordance with Article 3(1)(h), with the information required under Annex V, 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

### 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 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 8.
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 washing machine or household washer-dryer 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 8.
6. If the result referred to in point 5 is not achieved, the model and all models that have been listed as equivalent household washing machine or household washer-dryer 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 8 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 8 - Verification tolerances*

<b>Parameter</b>	<b>Verification tolerances</b>
Weighted energy consumption ( $E_t$ and $E_d$ )	The determined value* shall not exceed the declared value of $E_t$ , respectively $E_d$ , by more than 10 %.
Weighted water consumption ( $W_t$ and $W_d$ )	The determined value* shall not exceed the declared value of $W_t$ , respectively $W_d$ , by more than 10 %.
Washing efficiency index ( $I_w$ and $J_w$ )	The determined value* shall not be less than the declared value of $I_w$ , respectively $J_w$ , by more than 8 %.
Rinsing efficiency ( $I_R$ and $J_R$ )	The determined value* shall not exceed the declared value of $I_R$ , respectively $J_R$ , by more than 1,0 mg/g.
Duration of the eco 40-60 programme ( $t_w$ )	The determined value* of the programme duration shall not exceed the declared value of $t_w$ by more than 5 % or by more than 10 minutes, whichever is smaller.
Duration of the wash and dry cycle ( $t_d$ )	The determined value of the cycle duration shall not exceed the declared value of $t_d$ by more than 5 %.
Temperature inside the laundry (T)	The determined value shall not be less than the declared values by more than 5K and it shall not exceed the declared value by more than 5 K.
Remaining moisture content after washing (D)	The determined value* shall not exceed the rated value of D by more than 20 %.
Final moisture content after drying	The determined value* shall not exceed 3,0 %.
Spin speed (S)	The determined value shall not be less than the rated value of S by more than 10 %.
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, 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, by more than 0,10 W if the declared value is lower than or equal to 1,00 W.
Airborne acoustical noise emissions	The determined value* shall not exceed the declared value.

\* In the case of three additional units tested as prescribed in point 4, the determined value means the arithmetic average of the values determined for these three additional units.



## ANNEX X

### Multi-drum household washing machines

For multi-drum household washing machines, the provisions of Annexes II and IV to this Regulation, following the measurement and calculation methods set out in Annex III, shall apply to any drum with a rated capacity equal to or larger than 3 kg in multi-drum household washing machines, with the exception of drums with a rated capacity smaller than 4 kg and proposing no programme for normally soiled cotton laundry and no programme with a nominal temperature above 30 °C.

Where applicable as per the previous paragraph, the provisions of Annex IV shall apply to each of the drums independently, except when the drums are built in the same casing and can only operate simultaneously in all programmes, in which case the provisions of Annex IV shall apply to the multi-drum household washing machine as a whole, as follows:

- (a) the energy and water consumption of the overall household washing machine is the total of the energy, respectively water consumption, of each drum (summing up rated capacity and considering overall energy);
- (b) the Energy Efficiency Index (EEI) is calculated considering the overall rated capacity and energy consumption;
- (c) the duration is the common duration of all programmes operating simultaneously;
- (d) the acoustic airborne noise emissions measurement and class apply to the whole washing machine.

The product information sheet and the technical documentation shall include and present jointly the information required under Annex V and Annex VI respectively, for all the drums to which the provisions of Annex IV apply.

The provisions of Annexes VII and VIII apply to each of the drums to which the provisions of Annex IV apply.

The verification procedure set out in Annex IX applies to the multi-drum household washing machine as a whole, with the verification tolerances applying to each of the parameters determined in application of this annex.