Texte zu EU-Regelungen zur umweltgerechten Produktgestaltung und zur Energieverbrauchskennzeichnung in der Beleuchtung – Zusammenstellung [1] des Umweltbundesamtes (UBA), Deutschland

Diskussion über künftige Änderungsverordnungen (Produktgestaltung und -information)

Diskussionstext der EU-Kommission vom 10. Juni 2020: **Stellungnahme des Herstellerverbandes APPLiA [2] vom 30. Juni 2020**

Hinweis: Bitte beachten Sie, daß der angehängte Text nur in Englisch verfaßt ist.

EN: Information on EU Lighting Regulations – Ecodesign and Energy Labelling – Compilation [1] of the Federal Environment Agency (UBA), Germany

Discussion of future amending regulations (Product Design and Product Information)

The EU Commission's discussion text as of 10 June 2020: Comments by the Industry Association APPLiA [2] as of 30 June 2020

FR: Informations sur réglementations de l'UE concernant l'éclairage – l'écoconception et l'étiquetage énergétique – Compilation [1] de l'Agence Fédérale de l'Environnement (UBA), Allemagne

Discussion sur les futurs règlements modificatifs (Conception des produits et informations relatives aux produits)

Texte de discussion de la Commission européenne du 10 juin 2020 : Commentaires de l'association de producteurs APPLiA [2] de 30 juin 2020

Indication : Veuillez noter que le présent texte n'est disponible qu'en anglais.

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[1] https://www.eup-network.de/de/eup-netzwerk-deutschland/offenes-forum-eu-regelungen-beleuchtung/dokumente/texte/

[2] https://www.applia-europe.eu/

DE: ↓ **EN**: → page III **FR** : → page IV

Texte im Offenen Forum (**abc** = vorliegender Text)

- **Bestehende EG- und EU-Regelungen**
- **Studien der EU-Kommission**
- **Regelungsentwürfe**
  - Frühere Entwürfe
  - **Änderungsverordnungen**
    - Vorab-Stellungnahmen, Hintergrundinformationen und Diskussionstexte
    - Informelles Interessensgruppentreffen am 19. Februar 2020
    - **EK-Entwürfe vom Mai 2020 (Produktgestaltung und -information)**
      - Texte der EU-Kommission (20. Mai 2020)
      - Arbeitshilfen
      - **Stellungnahmen**
        - Mitgliedstaaten
        - **Andere Interessensvertretungen**
          - **Herstellerverband APPLiA (30. Juni 2020) [EN]**
          - Andere: ◦ Herstellerverband Lighting Europe ◦ Unterhaltungssektor ◦ Prof. Linow, Hochschule Darmstadt, DE ◦ Umweltorganisationen
    - Konsultationsforum (4. Juni 2020)
    - EK-Entwürfe vom Juni 2020 (Produktgestaltung und -information)
- **Öffentliche Konsultationen auf EU-Ebene**
- **Diskussion im Offenen Forum**
- **Weitere Dokumente**

Abkürzungen: ● EG = Europäische Gemeinschaft ● EK = EU-Kommission ● EU = Europäische Union

EN

Documents in the Open Forum (**abc** = text at hand)

- **Existing EC and EU Regulations**
- **Studies of the European Commission**
- **Draft regulations**
  - Earlier drafts
  - **Amending Regulations**
    - Comments in advance, background information and discussion texts
    - Informal stakeholder meeting on 19 February 2020
    - **EU Commission's drafts of May 2020 (Product design and information)**
      - Texts of the EU Commission (20 May 2020)
      - Working aids
      - **Comments**
        - Member States
        - **Other interested parties**
          - **Manufacturer association APPLiA (30 June 2020) [EN]**
          - Others: ◦ Manufacturer association Lighting Europe ◦ Entertainment sector ◦ Prof. Linow, University of applied sciences Darmstadt, DE ◦ Environmental organisations
    - Consultation Forum (4 June 2020)
    - EU Commission's drafts of June 2020 (Product design and information)
- **Public Consultations at EU level**
- **Discussion in the Open Forum**
- **Further documents**

Abbreviations: ● EC = European Communities ● EU = European Union

FR

Documents dans le forum ouvert (**abc** = présent document)

- **Règlements existants de la CE et de l'EU**
- **Études de la Commission européenne**
- **Projets de règlements**
  - Projets antérieurs
  - **Règlements modificatifs**
    - Commentaires en avance, informations de fond et textes de discussion
    - Réunion informelle des parties prenantes le 19 février 2020
    - **Projets de la Commission européenne du mai 2020 (Conception des produits et informations sur les produits)**
      - Textes de la Commission européenne (20 mai 2020)
      - Aides du travail
      - **Comments**
        - États membres
        - **Autres groupes d'intérêt**
          - **Association de producteurs APPLiA (30 juin 2020) [EN]**
          - Autres: ◦ Association de producteurs Lighting Europe ◦ Secteur du divertissement ◦ Prof. Linow, haute école spécialisée Darmstadt, DE ◦ Organisations environnementales
    - Forum consultatif (4 juin 2020)
    - Projets de la Commission européenne du juin 2020 (Conception des produits et informations sur les produits)
- **Consultations publiques au niveau de l'UE**
- **Discussion dans le Forum Ouvert**
- **Autres documents**

Abréviations : ● CE = Communauté européenne ● UE = Union européenne

Contents list

EN: For better orientation, headings are highlighted in colour: blue for labelling and yellow for ecodesign. The sections in which there are comments from APPLiA on requirements for lighting products are marked "**APPLiA**".

DE: Zur besseren Orientierung sind in Überschriften farbige Hinterlegung vorgenommen worden: blau für Produktinformation und gelb für Produktgestaltung. Die Abschnitte, in denen es Kommentare von APPLiA zu Anforderungen an Beleuchtungsprodukte gibt, sind mit „**APPLiA**“ gekennzeichnet.

FR : Pour une meilleure orientation, des fonds colorés ont été ajoutés aux rubriques : bleu pour les informations sur les produits et jaune pour la conception des produits. Les sections contenant les commentaires de APPLiA sur les exigences relatives aux produits d'éclairage sont marquées « **APPLiA** ».

DISCUSSION PAPER

Es folgt ein unveränderter Originaltext.

EN: The following is an unmodified original text.

FR: Ce qui suit est un texte original.

EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY

Directorate C - Renewables, Research and Innovation, Energy Efficiency
C.4 - Energy Efficiency: Buildings and Products

Brussels
ENER.C.4/

DISCUSSION PAPER

Subject: **Possible amendments to 2019 Commission Regulations with regard to energy labelling and ecodesign requirements**

APPLiA COMMENTS

For the sake of clarity, APPLiA comments are reported in **blue**

1. HORIZONTAL AMENDMENTS

1.1. Energy labelling

In order to increase clarity with regard to "declared" values and the difference between a parameter and a value, the Commission proposes to introduce the following common amendments in Commission Delegated Regulations 2019/2013, 2019/2014, 2019/2015, 2019/2016, 2019/2017 and 2019/2018 (article and annex numbering will be adapted to specific regulations):

1. A new recital is introduced:

   "Technical documentation should be sufficient to allow market surveillance authorities to check the values published on the label and in the product information sheet. In accordance with Article 12 of Regulation 2017/1369, values for the measured and calculated parameters of the model should be entered into the product database."

2. The following recital is added to all regulations (or replacing recital 14 for Regulation 2019/2013 and 17 for Regulation 2019/2016).

   "To improve the effectiveness and credibility of this Regulation and to protect consumers, products that automatically alter their performance in test conditions with the objective of reaching a more favourable level for any of the parameters specified in this Regulation should not be allowed to be placed on the market"

3. Article 3(1)(b) is modified:

- Current text: "*b) the parameters of the product information sheet, as set out in Annex V, are entered into the product database*"
- New text: "*b) **the values** of the parameters included in the product information sheet, as set out in Annex V, are entered into **the public part of** the product database.*"

4. The following definition is added to annex I: In case of Regulation 2019/2015, the following definition replaces the definition at Annex I, point (42):

   "'declared values' means the values provided by the supplier for the stated, calculated or measured technical parameters, in accordance with Article 3(1)(d) and Annex VI, for the verification of compliance by the Member State authorities."

5. Annex VI, point 1 is replaced as follows: (excluding Regulation 2019/2015)

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

   (a) a general description of the model allowing it to be unequivocally and easily identified, including model identifier;

   (b) references to the harmonised standards applied or other measurement standards used;

   (c) specific precautions to be taken when the model is assembled, installed, maintained or tested;

   (d) the values for the technical parameters set out in Table X; these values are considered as the declared values for the purpose of the verification procedure in Annex IX;

   (e) the details and the results of calculations performed in accordance with Annex IV, if not covered sufficiently in Table X;

   (f) testing conditions if not described sufficiently in point (b);

   (g) equivalence to other models has to be stated within the product database by the supplier. ~~a list of all equivalent models, including model identifiers~~

   These elements shall also constitute the mandatory specific parts of the technical documentation that the supplier shall enter into the database, pursuant to article 12.5 of Regulation 2017/1369.

   Annex VI, point 1(e) of Regulation 2019/2015 is replaced by the following:

   (e) the declared values for the following technical parameters; these values are considered as the declared values for the purpose of the verification procedure in Annex IX;

6. Annex IX, first sentence, reads as follows:

Commented [A1]: Regulation 2019/2014: there are two points, the first one for washing machines and the second one for washer dryers.
1. *For household washing machines, the technical documentation referred to in point 1(d) of Article 3 shall include the following elements:*

2. *For household washer-dryers, the technical documentation referred to in point 1(d) of Article 3 shall include the following elements:*

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Deleted: *a list of all equivalent models, including*

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Commented [A2]: APPLIA: The Framework Regulation 2017/1369 stipulates in Annex I 3(a), *Information to be entered in the compliance part of the database by the supplier: (a) the 'model' identifier of all equivalent models already placed on the market;*
The problem is that if this requirement would be followed word by word these identifiers will be outdated, as soon as after the registration a new "sister model" comes on the market or an existing "sister model" is taken off the market. Therefore, the Commission's EPREL programmers' team has developed a better solution: the supplier refers for each model registered to one equivalent model (base model) and by this a relation to all model identifiers of the "family" of equivalent models is defined.
If a market surveillance authority wishes to see all equivalent models, EPREL creates the respective list models which is up to date at the moment of the request. This solution is the best from a data management point of view and it therefore has been endorsed by the consultation forum and implemented in EPREL. We therefore propose not to ask in the legal text for a list but rather for the "disclosure of equivalence" without mentioning a concrete technical implementation (such as a list). This keeps the current implementation in EPREL and also allows for further improvements in the EPREL implementation in case those are found.

*The verification tolerances set out in this Annex relate only to the verification by Member State authorities of the **declared values** and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation.*

1.2. Ecodesign

In parallel, to ensure coherence, the following amendments could be proposed for Commission Ecodesign Regulations 2019/1781, 2019/2019, 2019/2020, 2019/2021, 2019/2022, 2019/2023 and 2019/2024:

7. Recitals 16 of regulation 2019/2022 (dishwashers), 17 of regulations 2019/2023 (washing machines/washer dryers), 2019/2019 (fridges) and 2019/2024 (fridges with a direct sale function), 20 of regulations 2019/2021 (displays) and 2019/2020 (light sources), read as follows:

   To ensure the effectiveness and credibility of the Regulation and to protect consumers, products that automatically alter their performance in test conditions to improve with the objective of reaching a more favourable level for any of the parameters specified in this Regulation should not be allowed to be placed on the market

8. The following paragraph is added to article 6 of regulations 2019/2019, 2019/2022 and 2019/2023 and article 7 of regulation 2019/2020:

   A software update shall never have the effect of changing the product's performance in a way that makes it non-compliant with the ecodesign requirements applicable for the declaration of conformity.

9. The following definition is added to Annex I of all regulations except 2019/2020:

   "'declared values' means the values provided by the supplier for the stated, calculated or measured technical parameters in accordance with Article 4.2, for the verification of compliance by the Member State authorities."

   In case of Regulation 2019/2020, the following definition replaces the definition at Annex I, point (52):

   "'declared values' means the values provided by the supplier for the stated, calculated or measured technical parameters in accordance with Article 5.2 and article 5.4, for the verification of compliance by the Member State authorities."

10. Annex IV first sentence of regulations 2019/2019, 2019/2020, 2019/2021, 2019/2022, 2019/2023 and 2019/2024, and annex III first sentence of regulation 2019/1781 reads as follows:

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

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Certain other amendments will be proposed which are “product specific” and which are considered necessary for clarity, addressing shortcomings or to make minor corrections and to ensure coherence between the energy labelling and the ecodesign Regulations. These are set out in the tables below.

2. SPECIFIC AMENDMENTS RELATED TO ENERGY LABELLING

2.1. Commission Delegated Regulation (EU) 2019/2013 supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of electronic displays

Provision	Current text	Amended text	Rationale
Article 1.2 (g)	Electronic displays that are components or subassemblies of products ~~covered by implementing measures adopted under Directive 2009/125/EU~~[1].	(g) (i) Electronic displays that are components or subassemblies of products covered by implementing measures adopted under Directive 2009/125/EU; (g) (ii) electronic displays that are components or subassemblies **or spare parts** of products **and which are not placed on the market and/or put into service ~~as individual parts for~~ for stand-alone use by end-users or the environmental performance of which cannot be assessed independently** ;	For coherence with ED. If on-mode consumption cannot be measured, the test cannot run. Moreover, the energy label of a displays integrated in a big appliance seems not having value. APPLiA believes that the exemption foreseen in art. 1.2(g) should remain unchanged as it provides legal certainty for manufacturers of home appliance with integrated displays. APPLiA understands that the Commission is thinking about also excluding displays integrated into equipment not covered by ecodesign measures from the scope of the display regulation. We believe this would be best achieved by adding a new exemption after article 1.2 g) (see point (g)(ii) below.
Article 1.2		(h) electronic displays for industrial applications in hostile environments	For coherence with ED (cf. proposals below).

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[1] Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products (OJ L 285, 31.10.2009, p.10).

The definition of "integrated" is necessary for Article 2		(21) 'displays for industrial applications in hostile environments' means an electronic display designed and intended for hostile environments for measuring, testing and process monitoring and control. It design must provide at least minimum level of ingress protection for dust tightness and water projected by a nozzle against enclosure from any direction, and, in addition include at least **three** of the following properties: suitability for regular use in ambient temperatures above 40°C, EMC immunity suitable for industrial environments, conformal coating of electronic components, assembly potting, advanced dimming for sunlight readability, impermeable enclosed circuit boards, integrated impact resistant screen.	Related to the previous item (for industrial displays to be excluded from scope, a detailed definition is necessary). See comments in the Ecodesign section
Recitals	(10) Electronic displays for professional use such as video-editing, computer-aided design, graphics or for the broadcast sector, possess enhanced performance and very specific features that, although usually involving higher energy use, should be not subject to on-mode energy efficiency requirements set for more generic products.	(10) Electronic displays for professional use such as video-editing, computer-aided design, graphics or for the broadcast sector, possess enhanced performance and very specific features that, although usually involving higher energy use, should be not subject to on-mode energy efficiency requirements set for more generic products. **Electronic displays for industrial applications in hostile environments have specific and high requirements, such as those for ingress protection at level 65 of EN 60259 and can hardly comply with eco-design requirements set for products design for use in less hostile conditions.**	See Ecodesign .

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Alternatively, a definition referring to ED was preferable.

Commented [A3]: Reference to the standard added in recital 10 to explain these requirements set as IP65. To be clarified also in Guidelines.

Deleted: minimum level of ingress protection of IP65 according to EN60529, ...

Deleted: EMI shield enclosure against external interference

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Annex III After 2.(f) ⓾,		'If the display does not support HDR, the HDR pictogram and the letters of energy efficiency classes are not displayed'. The screen pictogram, indicating screen size and resolution, may be vertically centered in the area below the indication of the energy consumption.	No indication exists for displays that may not have the HDR feature implemented. (the initial Commission proposal did not need any position adjustment when the HDR feature was missing)
Annex V, below Table 4		Changes to the information provided in accordance with rows 1, 2, 21, 22, 23 and 24 in table 4 shall not be relevant for the purposes of point 4 of Article 4 of Regulation (EU) 2017/1369.	Rows not relevant for **equivalence** (e.g. model identifier, although obvious)
Annex VI Table 5		**Table 5 could be replaced as shown below**	Details overlooked Table 5 and 6 totally replaced for clarity of the amendment.
Annex IX		**Table 6 could be replaced as shown below**	

Table 5

		Parameter value and	**Unit**	**Declared value**

		precision				
	General					
1	Supplier's name or trade mark	TEXT				
2	Supplier's model identifier	TEXT				
3	Energy efficiency class for Standard Dynamic Range (SDR)	[A/B/C/D/E/F/G]			A - G	
4	On mode power demand in Standard Dynamic Range (SDR)	XXX,X			W	
5	Energy efficiency **class for High Dynamic Range** (HDR), **if implemented**	[A/B/C/D/E/F/G] or n.a.			A - G	
6	On mode power demand in High Dynamic Range (HDR)	XXX,X			W	
7	Off mode, power demand	X,X			W	
8	Standby mode power demand	X,X			W	
9	Networked standby mode power demand	X,X			W	
10	Electronic display category	[television/ monitor/ signage / other]			TEXT	
11	Size ratio	XX	:	XX		
12	Screen resolution (pixels)	X	×	X		

13	Screen diagonal	XXX,X	cm	
14	Screen diagonal (calculated)	XX	inches	
15	Visible screen area	XXXX,X	dm^2	
16	Panel technology used	TEXT		
17	Automatic Brightness Control (ABC) available	[YES/NO]		
18	Voice recognition sensor available	[YES/NO]		
19	Room presence sensor available	[YES/NO]		
20	Image refresh frequency rate	XXX	Hz	
21	Minimum guaranteed availability of software and firmware updates **(from the date of end of the placement on the market, as from Annex II E, point 1 of Commission Regulation (EU) 2019/2021)**:	X	Years	
22	Minimum guaranteed availability of spare parts **(from the date of end of the placement on the market, as from Annex II D, point 1 of Commission Regulation (EU) 2019/2021)**:	X	Years	
23	Minimum guaranteed product support **(from the date of end of the placement on the market)**:	X	Years	

~~24~~	~~Ambient temperature~~	~~XX,XX~~	~~°C~~	
~~25~~	~~Test voltage~~	~~X~~	~~V~~	
~~26~~	~~Frequency~~	~~X,X~~	~~Hz~~	
~~27~~	~~Total harmonic distortion (THD) of the electricity supply system~~	~~X~~	~~%~~	
	For On-mode			
29	Peak white luminance of the brightest on mode configuration	XXXX	cd/m²	
30	Peak white luminance of the normal configuration	XXXX	cd/m²	
31	Peak white luminance ratio (calculated) **(Value row 6 above divided by value row 5 above times 100)**	XX,X	%	
	For APD			
29	Duration of the on mode condition, before the electronic display reaches automatically standby, or off mode, or another condition which does not exceed the applicable power demand requirements for off mode and/or standby mode.	XX:XX	mm:ss	

Commented [A4]: Testing conditions (rows 24-27) eliminated

30	For televisions: the value of the time before the television automatically reaches standby, or off-mode, or another condition which does not exceed the applicable power consumption requirements for off-mode and/or standby-mode following the last user interaction;	XX:XX	mm:ss	
31	For televisions equipped with room presence: the value of the time before the television automatically reaches standby, or off-mode, or another condition which does not exceed the applicable power consumption requirements when no presence is detected;	XX:XX	mm:ss	
32	Other electronic displays than televisions and broadcast displays: The value of the time before the television automatically reaches standby, or off-mode, or another condition which does not exceed the applicable power consumption requirements when no input is detected;	XX:XX	mm:ss	
	For ABC If available and activated by default (as from Annex VI, Table 4)			

33	Percentage of power reduction due to ABC action between the 100 lux and 12 lux ambient light conditions.	XX,X	%	
34	On mode power at 100 lux ambient light at the ABC sensor	XXX,X	W	
35	On mode power at 12 lux ambient light at the ABC sensor	XXX,X	W	
36	Screen luminance at 100 lux ambient light at the ABC sensor	XXX	cd/m²	
37	Screen luminance at 60 lux ambient light at the ABC sensor	XXX	cd/m²	
38	Screen luminance at 35 lux ambient at the ABC sensor	XXX	cd/m²	
39	Screen luminance at 12 lux ambient light at the ABC sensor	XXX	cd/m²	
	For Power Supply			
40	Power supply (internal or external, only if bundled with the display)	Standard reference (if any)	TEXT	
41	Input voltage	XXX,X	V	
42	Output voltage	XXX,X	V	

43	**Input current (max)**	**XX,X**	**A**	
44	**Output current (min)**	**XX.X**	**A**	

Table 6: Verification tolerances

Parameter	Verification tolerances
On mode power demand ($P_{measured}$, Watts)	The determined value* shall not exceed the declared value by more than 7 %.
Off mode, standby, and networked standby mode power demand in Watts, as applicable.	The determined value* shall not exceed the declared value by more than 0,10 Watt if the declared value is 1,00 Watt or less, or by more than 10 % if the declared value is more than 1,00 Watt.
Visible screen area	The determined value* shall not be lower than the declared value by more than 1 %.
The screen resolution in horizontal and vertical pixels	The determined value* shall not deviate from the declared value.
Peak white luminance	The determined value shall not be lower than the declared value by more than 6 %
Duration of the on mode condition, before the electronic display reaches automatically standby, or off mode, or another condition	The determined value shall not exceed the declared value by more than 10 seconds

which does not exceed the applicable power consumption requirements for off mode and/or standby mode.	

2.2. Commission Delegated Regulation (EU) 2019/2014 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

Provision	Current text	Amended text	Rationale
Recital 14	The relevant product parameters should be measured using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	The relevant product parameters should be measured **or calculated** using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	Some product parameters are not measured but calculated. This text is standard.
Annex IV point 1.	1. RATED CAPACITY OF HOUSEHOLD WASHER-DRYERS The rated capacity of household washer-dryers shall be measured, using the wash and dry cycle. If the household washer-dryer provides a continuous cycle, the rated capacity of the wash and dry cycle shall be the rated capacity for this cycle. If the household washer-dryer does not provide a continuous cycle, the rated capacity of the wash and dry cycle shall be the lower value of the rated washing capacity of the eco 40-60 programme	1. RATED CAPACITY OF HOUSEHOLD WASHER-DRYERS ~~The rated capacity of household washer-dryers shall be measured, using the wash and dry cycle~~. If the household washer-dryer provides a continuous cycle, the rated capacity of the wash and dry cycle shall be the rated capacity for this cycle. If the household washer-dryer does not provide a continuous cycle, the rated capacity of the wash and dry cycle shall be the lower value of the rated washing capacity of the eco 40-60 programme	There is no measurement for the rated capacity, this is only a stated value and not a measured value. As a matter of fact, there is no rated capacity for washing machine in the legal text. We recommend deleting the first paragraph of point 1.

	and the rated drying capacity of the drying cycle achieving cupboard dry status.	and the rated drying capacity of the drying cycle achieving cupboard dry status.	
Annex IV, point 3	3. WASHING EFFICIENCY INDEX The washing efficiency index of household washing machines and of the washing cycle of household washer-dryers (I_W) and the washing efficiency index of the complete cycle of household washer-dryers (J_W) shall be calculated 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 take into account the generally recognised state-of-the-art, and rounded to two decimal places.	3. WASHING EFFICIENCY INDEX The washing efficiency index of household washing machines and of the washing cycle of household washer-dryers (I_W) and the washing efficiency index of the complete cycle of household washer-dryers (J_W) shall be calculated 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 take into account the generally recognised state-of-the-art, and rounded to three decimal places. **For household washing machines with a rated capacity higher than 3kg and for the washing cycle of household washer-dryers with a rated capacity higher than 3kg, the I_W indicated on the Product Information Sheet shall be the minimum value between the washing efficiency index at rated washing capacity, half of the rated washing capacity, and quarter of the rated washing capacity.** **For household washing machines with a rated capacity lower than or equal to 3 kg and for the washing cycle of household washer-dryers with a rated capacity lower than or equal to 3 kg, the I_W indicated on the Product**	This modification is necessary: - because, in the current text, there is no indication on how the value of the washing efficiency index on the PIS should be calculated. - for consistency with Annex V and Annex VI APPLiA supports this clarification.

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		Information Sheet shall be the washing efficiency index at rated washing capacity. **For household washer-dryers with a rated capacity higher than 3 kg, the J_W indicated on the Product Information Sheet shall be the minimum value between the washing efficiency index at rated capacity and half of the rated capacity.** **For household washer-dryers with a rated capacity lower than or equal to 3 kg, the J_W indicated on the Product Information Sheet shall be the washing efficiency index at rated capacity.**	
Annex IV, point 4	4. RINSING EFFECTIVENESS The rinsing effectiveness of household washing machines and of the washing cycle of household washer-dryers (I_R) and the rinsing effectiveness of the complete cycle of household washer-dryers (J_R) shall be calculated 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 method based on the detection of the linear alkylbenzene sulfonate (LAS) marker, and rounded to one decimal place.	4. RINSING EFFECTIVENESS The rinsing effectiveness of household washing machines and of the washing cycle of household washer-dryers (I_R) and the rinsing effectiveness of the complete cycle of household washer-dryers (J_R) shall be calculated 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 method based on the detection of the linear alkylbenzene sulfonate (LAS) marker, and rounded to one decimal place. **For household washing machines with a rated capacity higher than 3 kg and for the washing cycle of household washer-dryers with a rated**	This modification is necessary because in the current text, there is no indication on how the value of the rinsing effectiveness on the PIS should be calculated. APPLiA supports this clarification.

		capacity higher than 3kg, the I_R indicated on the Product Information Sheet shall be the maximum value between the rinsing effectiveness at rated washing capacity, half of the rated washing capacity, and quarter of the rated washing capacity. **For household washing machines with a rated capacity lower than, or equal to 3 kg and for the washing cycle of household washer-dryers with a rated capacity lower than, or equal to 3 kg, no value shall be indicated for I_R on the Product Information Sheet.** **For household washer-dryers with a rated capacity higher than 3kg, the J_R indicated on the Product Information Sheet shall be the maximum value between the rinsing effectiveness at rated capacity and half of the rated capacity.** **For household washer-dryers with a rated capacity lower than, or equal to 3 kg, no value shall be indicated for J_R on the Product Information Sheet.**	
Annex IV, point 11	A new point is added.	**11. SPIN SPEED**	This modification is necessary because in the current text, there is no indication on how the

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		The spin speed of a household washing machine and of the washing cycle of a household washer-dryer shall be measured or calculated at the highest spin speed option for the eco 40-60 programme 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 take into account the generally recognised state-of-the-art, and rounded to the nearest integer.	values of the spin speed on the PIS should be determined.
Annex V, Table 5	Table 5 is replaced by another one.	Please see below (a third decimal has been added to the values of washing efficiency index, one decimal added to the values of remaining moisture content at rated washing capacity, half of the rated washing capacity, and quarter of the rated washing capacity, acronym EEI_W has been spelt out).	This modification is necessary because in the current text, there is a discrepancy between the Annex IV, PIS (Annex V) and TD (Annex VI) for these parameters.
Annex V, Table 6	Table 6 is replaced by another one.	Please see below (a third decimal has been added to the values of washing efficiency index, one decimal added to the values of remaining moisture content at rated washing capacity, half of the rated washing capacity, and quarter of the rated washing capacity, Energy consumption is calculated per cycle for both the washing cycle of the household washer dryer and the wash and dry cycle of the household washer dryer and not per kg per cycle, Maximum temperature inside the treated textile (°C) for the washing cycle of the household washer-dryer, using the eco 40-60 programme, has been slightly reworded,	This modification is necessary because in the current text, there is a discrepancy between the Annex IV, PIS (Annex V) and TD (Annex VI) for these parameters.

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		Maximum temperature inside the treated textile (°C) for the washing cycle of the household washer-dryer, using the wash and dry cycle has been added).	
Annex VI, Table 7	Table 7 is replaced by another one.	Table 7 is modified, see below: A third decimal has been added for the washing efficiency index I_W at rated, half and quarter rated capacity, one decimal has been added for remaining moisture content.	Consistency with the requirements on the same parameters in the ecodesign regulation. Consistency with the measurements methods and calculations (Annex IV)
Annex VI, Table 8	Table 8 is replaced by another one.	Table 8 is modified, see below : A third decimal has been added for the washing efficiency index I_W and J_W for all listed capacities, one decimal has been added for remaining moisture content.	Consistency with the requirements on the same parameters in the ecodesign regulation. Consistency with the measurements methods and calculations (Annex IV)
Annex VIII, paragraph 1	Information to be provided in the case of distance selling through the internet 1. The appropriate label made available by suppliers in accordance with point 1(g) of Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in 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	Information to be provided in the case of distance selling through the internet 1. The appropriate label made available by suppliers in accordance with point 1(g) of Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in **Annex III** ~~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	Erroneous reference to be corrected (the label size is in Annex III, not IV)

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	label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.	label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.	
Annex IX, point 7	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.	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 **the second paragraph** of this Annex **or** points 3 ~~and~~ **or** 6.	This point should be modified to include the non-compliance for the circumvention (in paragraph 2 of this Annex); if not, this specific non-compliance will not be subject to a mandatory reporting to other MS and COM. In the ecodesign regulation, "or" is written and not "and": "or" is correct because if only one of points 3 or 6 happen there should be a report to other MS and COM.

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Annex V

(amended) Table 5

Content, order and format of the product information sheet

Supplier's name or trade mark[a]**:**
Supplier's address[b] **:**

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Model identifier[1]:					
General product parameters:					
Parameter	Value		Parameter	Value	
Rated capacity [a] (kg)	x,x		Dimensions in cm[1]	Height	x
				Width	x
				Depth	x
Energy efficiency index[a] (EEI_W)	x,x		Energy efficiency class[a]	[A/B/C/D/E/F/G][c]	
Washing efficiency index[a]	**x,xxx**		Rinsing effectiveness (g/kg)[a]	x,x	
Energy consumption in kWh per cycle, based on the eco 40-60 programme. Actual energy consumption will depend on how the appliance is used.	x,xxx		Water consumption in litre per cycle, based on the eco 40-60 programme. Actual water consumption will depend on how the appliance is used and on the hardness of the water.	x	
Maximum temperature inside the treated textile[a] (°C)	Rated capacity	x	Remaining moisture content[a] (%)	Rated capacity	**x,x**
	Half	x		Half	**x,x**
	Quarter	x		Quarter	**x,x**

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Spin speed [a] (rpm)	Rated capacity	x	Spin-drying efficiency class[a]	[A/B/C/D/E/F/G][c]
	Half	x		
	Quarter	x		
Programme duration [a] (h:min)	Rated capacity	x:xx	Type	[built-in/free-standing]
	Half	x:xx		
	Quarter	x:xx		
Airborne acoustical noise emissions in the spinning phase[a] (dB(A) re 1 pW)	x		Airborne acoustical noise emission class[a] (spinning phase)	[A/B/C/D][c]
Off-mode (W)	x,xx		Standby mode (W)	x,xx
Delay start (W) (if applicable)	x,xx		Networked standby (W) (if applicable)	x,xx
Minimum duration of the guarantee offered by the supplier [b1]:				
This product has been designed to release silver ions during the washing cycle			**[YES/NO]**	
Additional information[1]:				
Weblink to the supplier's website, where the information in point 9 of Annex II to Commission Regulation (EU) 2019/2023[1] [b] is found[1]:				

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[1] this item shall not be considered relevant for the purposes of Article 2(6) of Regulation (EU) 2017/1369.
[a] for the eco 40-60 programme.
[b] changes to these items shall not be considered relevant for the purposes of paragraph 4 of Article 4 of Regulation (EU) 2017/1369.
[c] if the product database automatically generates the definitive content of this cell the supplier shall not enter these data

(amended) Table 6

Content, order and format of the product information sheet

Supplier's name or trade mark[1]:					
Supplier's address ([c])[1]:					
Model identifier[1]:					
General product parameters:					
Parameter	Value		Parameter	Value	
Rated capacity (kg)	Rated capacity ([b])	x,x	Dimensions in cm[1]	Height	x
	Rated washing capacity ([a])	x,x		Width	x
				Depth	x
Energy Efficiency Index	EEI_W ([a])	x,x	Energy efficiency class	EEI_W ([a])	[A/B/C/D/ E/F/G][d]

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	EEI_{WD} ([b])	x,x		EEI_{WD} ([b])	[A/B/C/D/ E/F/G][d]
Washing efficiency index	I_W ([a])	x,xxx	Rinsing effectiveness (g/ kg dry textile)	I_R ([a])	x,x
	J_W ([b])	x,xxx		J_R ([b])	x,x
Energy consumption in kWh ~~per kg~~ per cycle, for the washing cycle of the household 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	x,xxx		Energy consumption in kWh ~~per kg~~ per cycle, for the wash and dry cycle of the household washer-dryer at a combination of full and half loads. Actual energy consumption will depend on how the appliance is used	x,xxx	
Water consumption in litre 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	x		Water consumption in litre per cycle, for the wash and dry cycle of the household 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	x	

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Maximum temperature inside the treated textile (°C) for the washing cycle of the household washer-dryer, **using the eco 40-60 programme,**	Rated washing capacity	x	**Maximum temperature inside the treated textile (°C) for the washing cycle of the household washer-dryer, using the wash and dry cycle.**	**Rated capacity**	**x**
	Half	x			
	Quarter	x		**Half**	**x**
Spin speed (rpm) ([a])	Rated washing capacity	x	Remaining moisture content (%) ([a])	Rated washing capacity	**x,x**
	Half	x		Half	**x,x**
	Quarter	x		Quarter	**x,x**
Eco 40-60 programme duration (h:min)	Rated washing capacity	x:xx	Spin-drying efficiency class ([a])	[A/B/C/D/E/F/G] ([d])	
	Half	x:xx			
	Quarter	x:xx			
Airborne acoustical noise emissions during the spinning phase for the eco 40-60 washing cycle at rated washing capacity (dB(A) re 1 pW)	x		wash and dry cycle duration (h:min)	Rated capacity	x:xx
				Half	x:xx

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Type	[built-in/free-standing]	Airborne acoustical noise emission class for the spinning phase for the eco 40-60 programme at rated washing capacity	[A/B/C/D] ([d])
Off-mode (W)	x,xx	Standby mode (W)	x,xx
Delay start (W) (if applicable)	x,xx	Networked standby (W) (if applicable)	x,xx
Minimum duration of the guarantee offered by the supplier ([c])[1]:			
This product has been designed to release silver ions during the washing cycle		**[YES/NO]**	
Additional information[1]:			
Weblink to the supplier's website, where the information in point 9 of Annex II to Regulation (EU) 2019/2023 is found ([b])[1]:			

[1] this item shall not be considered relevant for the purposes of Article 2(6) of Regulation (EU) 2017/1369

([a]) for the eco 40-60 programme

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(b) for the wash and dry cycle

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

(d) if the product database automatically generates the definitive content of this cell the supplier shall not enter these data.

Annex VI

(amended) Table 7

Technical parameters of the model and their declared values for household washing machines

PARAMETER	**DECLARED VALUE**	UNIT
Rated capacity for the eco 40-60 programme, at 0,5 kg intervals (c)	X,X	kg
Energy consumption of the eco 40-60 programme at rated capacity ($E_{W,full}$)	X,XXX	kWh/cycle
Energy consumption of the eco 40-60 programme at half rated capacity ($E_{W,½}$)	X,XXX	kWh/cycle

Energy consumption of the eco 40-60 programme at quarter rated capacity ($E_{W,1/4}$)	X,XXX	kWh/cycle
Weighted energy consumption of the eco 40-60 programme (E_W)[1]	X,XXX	kWh/cycle
Standard energy consumption of the eco 40-60 programme (SCE_W)[2]	X,XXX	kWh/cycle
Energy Efficiency Index (EEI_W)[3]	X,X	-
Water consumption of the eco 40-60 programme at rated capacity ($W_{W,full}$)	X,X	L/cycle
Water consumption of the eco 40-60 programme at half rated capacity ($W_{W,½}$)	X,X	L/cycle
Water consumption of the eco 40-60 programme at quarter rated capacity ($W_{W,1/4}$)	X,X	L/cycle
Weighted water consumption (W_W)[4]	X	L/cycle
Washing efficiency index of the eco 40-60 programme at rated capacity (I_w)	**X,XXX**	-
Washing efficiency index of the eco 40-60 programme at half rated capacity (I_w)	**X,XXX**	-
Washing efficiency index of the eco 40-60 programme at quarter rated capacity (I_w)	**X,XXX**	-

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Rinsing effectiveness of the eco 40-60 programme at rated capacity (I_R)	X,X	g/kg
Rinsing effectiveness of the eco 40-60 programme at half rated capacity (I_R)	X,X	g/kg
Rinsing effectiveness of the eco 40-60 programme at quarter rated capacity (I_R)	X,X	g/kg
Programme duration of the eco 40-60 programme at rated capacity (t_w)	X:XX	h:min
Programme duration of the eco 40-60 programme at half rated capacity (t_w)	X:XX	h:min
Programme duration of the eco 40-60 programme at quarter rated capacity (t_w)	X:XX	h:min
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at rated capacity (T)	X	°C
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at half rated capacity (T)	X	°C
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at quarter rated capacity (T)	X	°C
Spin speed in the spinning phase of the eco 40-60 programme at rated capacity (S)	X	rpm

Spin speed in the spinning phase of the eco 40-60 programme at half rated capacity (S)	X	rpm
Spin speed in the spinning phase of the eco 40-60 programme at quarter rated capacity (S)	X	rpm
Remaining moisture content for the eco 40-60 programme at rated capacity (D_{full})	**X,X**	%
Remaining moisture content for the eco 40-60 programme at half rated capacity ($D_{1/2}$)	**X,X**	%
Remaining moisture content for the eco 40-60 programme at quarter rated capacity ($D_{1/4}$)	**X,X**	%
Weighted remaining moisture content (D)[5]	X	%
Airborne acoustical noise emissions during eco 40-60 programme (spinning phase)	X	dB(A) re 1 pW
Power consumption in 'off mode' (P_o) (if applicable)	X,XX	W
Power consumption in 'standby mode' (P_{sm}) (if applicable)	X,XX	W
Does 'standby mode' include the display of information?	Yes/No	-
Power consumption in 'standby mode' (P_{sm}) in condition of networked standby (if applicable)	X,XX	W

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Power consumption in 'delay start' (P_{ds}) (if applicable)	X,XX	W

[1] The value of this parameter is verified according to ANNEX IX 2(c) of this Regulation by comparing it to the determined value and by verifying the correctness of the calculation according to ANNEX IV 2.1(c) carried out with the declared values at a quarter of the rated capacity, at half of the rated capacity and at rated capacity of this parameter.

[2] The verification of the value of this parameter is only performed to verify the correctness of the calculation according to ANNEX IV 2.1 (b).

[3] The value of this parameter is verified by verification of the values of the parameter E_W and SCE_w and by verification of the correctness of the calculation according to ANNEX IV 2.1(a).

[4] The value of this parameter is verified according to ANNEX IX 2(c) of this Regulation by comparing it to the determined value and by verifying the correctness of the calculation according to ANNEX IV 6. (1) carried out with the declared values at a quarter of the rated capacity, at half of the rated capacity and at rated capacity of this parameter.

[5] The value of this parameter is verified according to ANNEX IX 2(c) of this Regulation by comparing it to the determined value and by verifying the correctness of the calculation according to ANNEX IV 7. carried out with the declared values at a quarter of the rated capacity, at half of the rated capacity and at rated capacity of this parameter.

(amended) Table 8

Technical parameters of the model and their declared values for household washer-dryers

PARAMETER	DECLARED VALUE	UNIT
Rated capacity for the washing cycle, at 0,5 kg intervals (c)	X,X	kg
Rated capacity for the wash and dry cycle, at 0,5 kg intervals (d)	X,X	kg
Energy consumption of the eco 40-60 programme at rated washing capacity ($E_{W,full}$)	X,XXX	kWh/cycle
Energy consumption of the eco 40-60 programme at half of the rated washing capacity ($E_{W,½}$)	X,XXX	kWh/cycle
Energy consumption of the eco 40-60 programme at a quarter of the rated washing capacity ($E_{W,1/4}$)	X,XXX	kWh/cycle
Weighted energy consumption of the eco 40-60 programme (E_W)[1]	X,XXX	kWh/cycle
Standard energy consumption of the eco 40-60 programme (SCE_W)[2]	X,XXX	kWh/cycle
Energy Efficiency Index of the washing cycle (EEI_W)[3]	X,X	-

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Energy consumption of the wash and dry cycle at rated capacity ($E_{WD,full}$)	X,XXX	kWh/cycle
Energy consumption of the wash and dry cycle at half rated capacity ($E_{WD,½}$)	X,XXX	kWh/cycle
Weighted energy consumption of the wash and dry cycle (E_{WD})[4]	X,XXX	kWh/cycle
Standard energy consumption of the wash and dry cycle (SCE_{WD})[5]	X,XXX	kWh/cycle
Energy Efficiency Index of the wash and dry cycle (EEI_{WD})[6]	X,X	-
Water consumption of the eco 40-60 programme at rated washing capacity ($W_{W,full}$)	X,X	L/cycle
Water consumption of the eco 40-60 programme at half of the rated washing capacity ($W_{W,½}$)	X,X	L/cycle
Water consumption of the eco 40-60 programme at a quarter of the rated washing capacity ($W_{W,1/4}$)	X,X	L/cycle
Weighted water consumption of the washing cycle (W_W)[7]	X	L/cycle
Water consumption of the wash and dry cycle at rated capacity ($W_{WD,full}$)	X,X	L/cycle

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Water consumption of the wash and dry cycle at half rated capacity ($W_{WD,½}$)	X,X	L/cycle
Weighted water consumption of the wash and dry cycle (W_{WD})[8]	X	L/cycle
Washing efficiency index of the eco 40-60 programme at rated washing capacity (I_w)	**X,XXX**	-
Washing efficiency index of the eco 40-60 programme at half rated washing capacity (I_w)	**X,XXX**	-
Washing efficiency index of the eco 40-60 programme at quarter rated washing capacity (I_w)	**X,XXX**	-
Washing efficiency index of the wash and dry cycle at rated capacity (J_w)	**X,XXX**	-
Washing efficiency index of the wash and dry cycle at half rated capacity (J_w)	**X,XXX**	-
Rinsing effectiveness of the eco 40-60 programme at rated washing capacity (I_R)	X,X	g/kg
Rinsing effectiveness of the eco 40-60 programme at half rated washing capacity (I_R)	X,X	g/kg
Rinsing effectiveness of the eco 40-60 programme at quarter rated washing capacity (I_R)	X,X	g/kg

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Rinsing effectiveness of the wash and dry cycle at rated capacity (J_R)	X,X	g/kg
Rinsing effectiveness of the wash and dry cycle at half rated capacity (J_R)	X,X	g/kg
Programme duration of the eco 40-60 programme at rated washing capacity (t_w)	X:XX	h:min
Programme duration of the eco 40-60 programme at half rated washing capacity (t_w)	X:XX	h:min
Programme duration of the eco 40-60 programme at quarter rated washing capacity (t_w)	X:XX	h:min
Cycle duration of the wash and dry cycle at rated capacity (t_{WD})	X:XX	h:min
Cycle duration of the wash and dry cycle at half rated capacity (t_{WD})	X:XX	h:min
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at rated washing capacity (T)	X	°C
Temperature reached for minimum 5 min inside the load during eco 40-60 programme at half rated washing capacity (T)	X	°C

Temperature reached for minimum 5 min inside the load during eco 40-60 programme at quarter rated washing capacity (T)	X	°C
Temperature reached for minimum 5 min inside the load in the washing cycle during wash and dry cycle at rated capacity (T)	X	°C
Temperature reached for minimum 5 min inside the load in the washing cycle during wash and dry cycle at half rated capacity (T)	X	°C
Spin speed in the spinning phase of the eco 40-60 programme at rated washing capacity (S)	X	rpm
Spin speed in the spinning phase of the eco 40-60 programme at half rated washing capacity (S)	X	rpm
Spin speed in the spinning phase of the eco 40-60 programme at quarter rated washing capacity (S)	X	rpm
Remaining moisture content for the eco 40-60 programme at rated washing capacity (D_{full})	**X,X**	%
Remaining moisture content for the eco 40-60 programme at half rated washing capacity ($D_{1/2}$)	**X,X**	%
Remaining moisture content for the eco 40-60 programme at quarter rated washing capacity ($D_{1/4}$)	**X,X**	%

Weighted remaining moisture content after washing (D)[9]	X	%
Final moisture content after drying	X,X	%
Airborne acoustical noise emissions during eco 40-60 programme (spinning phase)	X	dB(A) re 1 pW
Power consumption in 'off mode' (P_o)	X,XX	W
Power consumption in 'standby mode' (P_{sm})	X,XX	W
Does 'standby mode' include the display of information?	Yes/No	-
Power consumption in 'standby mode' (P_{sm}) in condition of networked standby (if applicable)	X,XX	W
Power consumption in 'delay start' (P_{ds}) (if applicable)	X,XX	W

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[1] The value of this parameter is verified according to ANNEX IX 2(c) of this Regulation by comparing it to the determined value and by verifying the correctness of the calculation according to ANNEX IV 2.1(c) carried out with the declared values at a quarter of the rated washing capacity, at half of the rated washing capacity and at rated washing capacity of this parameter.

[2] The verification of the value of this parameter is only performed to verify the correctness of the calculation according to ANNEX IV 2.1 (b).

[3] The value of this parameter is verified by verification of the values of the parameters E_W and SCE_w and by verification of the correctness of the calculation according to ANNEX IV 2.1(a).

[4] The value of this parameter is verified according to ANNEX IX 2(c) of this Regulation by comparing it to the determined value and by verifying the correctness of the calculation according to ANNEX IV 2.2(c) carried out with the declared values at half of the rated capacity and at rated capacity of this parameter.

[5] The verification of the value of this parameter is only-performed to verify the correctness of the calculation according to ANNEX IV 2.2(b).

[6] The value of this parameter is verified by verification of the values of the parameter E_{WD} and SCE_{WD} and by the verification of the correctness of the calculation according to ANNEX IV 2.2(a).

[7] The value of this parameter is verified according to ANNEX IX 2(c) of this Regulation by comparing it to the determined value and by verifying the correctness of the calculation according to ANNEX IV 6. (1) carried out with the declared values at a quarter of the rated washing capacity, at half of the rated washing capacity and at rated washing capacity of this parameter.

[8] The value of this parameter is verified according to ANNEX IX 2(c) of this Regulation by comparing it to the determined value and by verifying the correctness of the calculation according to ANNEX IV 6. (2) carried out with the declared values at half of the rated capacity and at rated capacity of this parameter.

[9] The value of this parameter is verified according to ANNEX IX 2(c) of this Regulation by comparing it to the determined value and by verifying the correctness of the calculation according to ANNEX IV 7. carried out with the declared values at a quarter of the rated washing capacity, at half of the rated washing capacity and at rated washing capacity of this parameter.

APPLiA clarification on Table 9 Annex IX

Table 9
Verification tolerances

Parameter	**Verification tolerances**
$E_{W,full}$, $E_{W,½}$, $E_{W,1/4}$, $E_{WD,full}$, $E_{WD,½}$	The determined value* shall not exceed the declared value of $E_{W,full}$, $E_{W,½}$, $E_{W,1/4}$, $E_{WD,full}$ and $E_{WD,½}$, respectively, by more than 10 %.
Weighted energy consumption (E_W and E_{WD})	The determined value* shall not exceed the declared value of E_W, respectively E_{WD}, by more than 10 %.
$W_{W,full}$, $W_{W,½}$ $W_{W,1/4}$, $W_{WD,full}$, $W_{WD,½}$	The determined value* shall not exceed the declared value of $W_{W,full}$, $W_{W,½}$ $W_{W,1/4}$, $W_{WD,full}$ and $W_{WD,½}$, respectively, by more than 10 %.
Weighted water consumption (W_W and W_{WD})	The determined value* shall not exceed the declared value of W_W, respectively W_{WD}, by more than 10 %.
Washing efficiency index (I_W) at rated washing capacity, at half rated washing capacity; Washing Efficiency Index (J_W) at rated capacity and half rated capacity	The determined value* shall not be less than the declared value of I_W, respectively J_w, by more than 8 %.

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Rinsing effectiveness (I_R) at rated washing capacity, at half rated washing capacity and at quarter rated washing capacity. Rinsing effectiveness (J_R) at rated capacity and at half rated capacity.	The determined value* shall not exceed the declared value of I_R, respectively J_R, by more than 1,0 g/kg.
Programme duration at rated washing capacity, at half rated washing capacity and at quarter rated washing capacity. Cycle duration at rated capacity and at half rated.	The determined value* of the programme or cycle duration shall not exceed the declared value by more than 5 % or by more than 10 minutes, whichever is smaller.
Maximum temperature inside the laundry (T) in the washing phase for all rated capacities.	The determined value shall not be less than the declared values of T by more than 5K and it shall not exceed the declared value of T by more than 5K.
D_{full}, $D_{½}$, $D_{1/4}$	The determined value* shall not exceed the declared value of D_{full}, $D_{½}$ and $D_{1/4}$, respectively, by more than 10 %.
Weighted remaining moisture content after washing (D)	The determined value* shall not exceed the declared value of D by more than 10 %.

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Final moisture content after drying at rated capacity and at half rated capacity	The determined value* shall not exceed 3,0 %.
Spin speed (S) at rated washing capacity, at half rated washing capacity and at quarter rated washing capacity.	The determined value* shall not be less than the declared 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, or by more than 0,10 W if the declared value is lower than or equal to 1,00 W.
Power consumption in delay start (P_{ds})	The determined value* of power consumption P_{ds} shall not exceed the declared value by more than 10 % if the declared value is higher than 1,00 W, or by more than 0,10 W if the declared value is lower than or equal to 1,00 W.
Airborne acoustical noise emissions	The determined value* shall not exceed the declared value by more than 2 dB re 1 pW.

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

Commented [A11]: APPLIA We understand that this tolerance is valid for all three loads for the washing cycle.

2.3. Commission Delegated Regulation (EU) 2019/2015 supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of light sources and repealing Commission Delegated Regulation (EU) No 874/2012

Provision	Current text	Amended text	Rationale
New recital		The relevant product parameters should be measured or calculated using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	Some product parameters are not measured but calculated. This text is standard.
Article 2, point (3)	'containing product' means a product containing one or more light sources, or separate control gears, or both. Examples of containing products are luminaires that can be taken apart to allow separate verification of the contained light source(s), household appliances containing light source(s), furniture (shelves, mirrors, display cabinets) containing light source(s). If a containing product cannot be taken apart for verification of the light source and separate	Article 2, point (3) is replaced by the following: 'containing product' means a **containing product for light sources or a containing product for separate control gears or both.** **'containing product for light sources' means a product containing one or more light sources, from which all contained light sources can be removed for verification.**	Stakeholders flagged that the current definition of 'containing products' might create legal uncertainty when correlated with other definitions (e.g. of light sources). The updated definition also aims to clarify that some products, e.g. fridges or dishwashers should not be seen as light sources. We welcome the attempt to modify the definition of containing product which now clarifies from legal point of view that an appliance can never be considered as a light source for verification purposes.

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	control gear, the entire containing product is to be considered a light source;	**'containing product for separate control gears' means a product containing one or more separate control gears, from which all contained separate control gears can be removed for verification.** Examples of 'containing products **for light sources**' are luminaires that can be taken apart to allow separate verification of the contained light source(s), household appliances containing light source(s), furniture (shelves, mirrors, display cabinets) containing light source(s). ~~If a containing product cannot be taken apart for verification of the light source and separate control gear, the entire containing product is to be considered a light source~~	Nevertheless, we still see a possible conflict with Article 4 – we don't understand the meaning and the added value of the sentence highlighted in yellow when considering it together with Art. 4. The above comment is valid also for the definition of 'containing product for separate control gear' and for the examples. We believe that the definitions are clearer and easier to understand if the highlighted text is removed.
Annex III, point 1	The label shall be: - for the standard-sized label at least 36 mm wide and 75 mm high; - for the small-sized label (width less than 36 mm) at least 20 mm wide and 54 mm high.	The label shall be: - for the standard-sized label at least 36 mm wide and ~~75~~**72** mm high; - for the small-sized label (width less than 36 mm) at least 20 mm wide and 54 mm high.	To correct an error in the regulation. The current text mentions a label height of 75 mm, but it should be 72 mm, in accordance with the drawings.
Annex IV, point 1(a)	in radiological and nuclear medicine installations, as defined in Article 3 of Council Directive 2009/71/Euratom ([1]);	in radiological and nuclear medicine installations that are subject to radiation safety	To correct an erroneous reference (to a wrong EURATOM Directive)

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	(Footnote 1) Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations (OJ L 172, 2.7.2009, p. 18).	standards as set out in Council Directive ~~2009/71~~**2013/59**/EURATOM ([1]); **([1]) Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation (OJ L 13, 17.1.2014, p. 1).**	
Annex IV point 2 – new letter	N / A – to add	2. In addition, this Regulation with the exemption of Annex VI shall not apply to: (x)(i) light sources that are designed to operate exclusively within a containing product whose primary purpose is not lighting and the product is dependent on energy input in fulfilling its primary purpose during use, e.g. household appliances. (x)(ii) light sources placed on the market as spare parts, which can be used only in specific products and that cannot be used individually by the end-user for other purposes.	Most light sources used in home appliances are efficient LEDs and fulfil the ecodesign requirements already today. In addition, these are mostly specifically designed light sources which means that they have a very limited risk to be used in other applications by consumers when sold separately as spare parts. Therefore, we propose that specifically designed light sources that fulfil the ecodesign requirements are exempted from the Energy Labelling Regulation. Manufacturer will need to still comply with Annex VI (Technical Documentation) of EL and Article 5 point 4 of the Ecodesign Regulation. With our proposal lamps that fall under the exemption of the Ecodesign Regulation Annex III 3.(q)(r) – high temperature application – as well as off-the-shelf lamps, would still fall under the scope of the Energy label regulation

			whenever these are non-specifically designed lamps. This will also ensure that consumers will have access to spare parts in the long term enabling the reparability principle.
Annex V, point 1, Table 3	Energy consumption in on-mode (kWh/1 000 h) | x | Energy efficiency class | [A/B/C/D/E/F/G] ([b])	Energy consumption in on-mode (kWh/1 000 h), **rounded up to the nearest integer** | x | Energy efficiency class | [A/B/C/D/E/F/G] ([b])	To clarify the rule for rounding the figure on energy consumption.
Annex V, point 1, Table 3	Useful luminous flux (Φuse), indicating if it refers to the flux in a sphere (360°), in | x in [sphere/wide cone/narrow cone] | Correlated colour temperature, rounded to the nearest 100 K, or the range of correlated colour temperature | [x/x…x]	Useful luminous flux (Φuse), indicating if it refers to the flux in a sphere (360°), in a wide | x in [sphere/wide cone/narrow cone] | Correlated colour temperature, rounded to the nearest 100 K, or the range of correlated colour temperatures, rounded | **[x/x…x/x or x (or x…)]**	To further clarify the available options for declaring the figure(s) for Correlated colour temperature. The current options include a single value and a (continuous) range of values. The suppliers flagged that a number of discrete steps should also be allowed (e.g. 2700 K or 3500 K).

	a wide cone (120°) or in a narrow cone (90°) | | s, rounded to the nearest 100 K, that can be set |	cone (120°) or in a narrow cone (90°) | | to the nearest 100 K, that can be set |	
Annex V, point 1, Table 3	[new row]	**Lifetime ($L_{70}B_{50}$) expressed in hours** | **x** | |	To add a technical parameter that is missing from the product information sheet
Annex V, point 1, Table 7	Rated light source luminous flux Φ (lm) | Claimed equivalent incandescent light source power (W)	~~Rated~~ Light source luminous flux Φ (lm) | Claimed equivalent incandescent light source power (W)	To amend the text in the table header for making it clearer. The current text contains the word 'rated', which is neither defined, nor necessary and was therefore removed.
Annex VI, point 1(e)	[new text]	**(4a) peak luminous intensity in cd for directional light sources (DLS);** **(7a) R9 colour rendering index value for LED and OLED light sources;** **(7b) survival factor for LED and OLED light sources;**	To add to the technical documentation some technical parameters that are missing, but are necessary for verifying the information in the product information sheet.

		(7c) lumen maintenance factor for LED and OLED light sources; **(7d) lifetime $L_{70}B_{50}$ for LED and OLED light sources;**	
Annex VI, point 1(e)(5)	correlated colour temperature (CCT) in K for FL and HID light sources;	correlated colour temperature (CCT) in K ~~for FL and HID light sources~~	To further clarify this technical parameter required in the technical documentation. The CCT applies to all technologies, not only to FL and HID.
Annex IX	[New text]	**Where a model has been designed to be able to detect it is being tested (e.g. by recognising the test conditions or test cycle), and to react specifically by automatically altering its performance during the test with the objective of reaching a more favourable level for any of the parameters specified in this Regulation or included in the technical documentation or included in any of the documentation provided, the model and all equivalent models shall be considered not compliant.**	Consistency across regulations

<table>
<tr>
<td>Annex IX, point 1 2nd sentence</td>
<td>The Member State authorities shall verify 10 units of the light source model for point 2(c) of this Annex. The verification tolerances are laid down in Table 6 of this Annex.</td>
<td>In Annex IX, point 1, second paragraph is replaced by the following:

‘The Member State authorities shall verify 10 units of the light source model for point 2(c) of this Annex. The verification tolerances are laid down in Table 9 of this Annex.’</td>
<td>To correct a mistake. The current text wrongly refers to Table 6 instead of Table 9.</td>
</tr>
<tr>
<td>Annex IX, Table 9</td>
<td>
<table>
<tr><td>Flicker [Pst LM] and stroboscopic effect [SVM]</td><td>10</td><td>The determined value shall not exceed the declared value by more than 10 %.</td></tr>
</table>
</td>
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<table>
<tr><td>Flicker [P_{st} LM] and stroboscopic effect [SVM]</td><td>10</td><td>The determined value shall not exceed the declared value by more than 0,1.</td></tr>
</table>
</td>
<td>To compensate for some low tolerances calculated in relation to small numbers (less than one unit).</td>
</tr>
<tr>
<td>Annex IX, Table 9</td>
<td>
<table>
<tr><td>Lumen maintenance factor (for FL and HID)</td><td>10</td><td>The determined value shall not be less than 90 % of the declared value.</td></tr>
<tr><td>Survival factor (for FL and HID)</td><td>10</td><td>The determined value shall not be less than the declared value.</td></tr>
</table>
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<td>
<table>
<tr><td>~~Lumen maintenance factor (for FL and HID)~~</td><td>~~10~~</td><td>~~The determined value shall not be less than 90 % of the declared value.~~</td></tr>
<tr><td>~~Survival factor (for FL and HID)~~</td><td>~~10~~</td><td>~~The determined value shall not be less than the declared value.~~</td></tr>
</table>
</td>
<td>To remove unnecessary rows from the table of verification tolerances.

Lumen maintenance factor and survival factor for FL and HID are not defined or required values, therefore no tolerances are needed.</td>
</tr>
</table>

Annex IX, Table 9	Luminous peak intensity [cd] | 10 | The determined value shall not deviate from the declared value by more than 25 %.	Peak luminous intensity [cd] | 10 | The determined value shall not deviate from the declared value by more than 25 %.	To use the correct terminology ‘peak luminous intensity’ and maintain coherence with other parts of the text. The text currently in the table reads ‘luminous peak intensity’.

2.4. Commission Delegated Regulation (EU) 2019/2016 supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of refrigerating appliances and repealing Commission Delegated Regulation (EU) No 1060/2010

Provision	Current text	Amended text	Rationale
Recital 16	The relevant product parameters should be measured using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	The relevant product parameters should be measured **or calculated** using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	Some product parameters are not measured but calculated. This text is standard.
Article 2, point 31	'mobile refrigerating appliance' means a refrigerating appliance that can be used where there is no access to the mains electricity grid and that uses extra low-voltage electricity (< 120V DC) or fuel or both as the energy source for the refrigeration functionality, including a refrigerating appliance that, in addition to extra low voltage electricity or fuel, or both, can be electric mains operated. *An appliance placed on the market with an AC/DC converter is not a mobile refrigerating appliance*;	No proposal	One manufacturer and some Member States have raised their concerns with '*An appliance placed on the market with an AC/DC converter is not a mobile refrigerating appliance*;' This was included to close a potential loophole and introduced by IT during the regulatory committee. The manufacturer claims that some appliances, i.e. mobile refrigerating appliances with fan and integrated AC/DC converter' are now unintentionally in the scope of the regulation and have to comply with requirements they cannot meet. IT is against changing the definition; they

			state that their manufacturers already adapted their products.
Annex I, point 4	'freezing capacity' means the amount of fresh foodstuffs that can be frozen in a freezer compartment in 24 h; it shall not be lower than 4,5 kg per 24 h per 100 litres of volume of the freezer compartment, with a minimum of ~~2,0~~ kg/24h	'freezing capacity' means the amount of fresh foodstuffs that can be frozen in a freezer compartment in 24 h; it shall not be lower than 4,5 kg per 24 h per 100 litres of volume of the freezer compartment, with a minimum of **2,0~~6~~** kg/24h This item should remain unchanged, so left at 2.0 kg/24h	To correct an inconsistency in the Regulation As clarified by the commission, the amendment shall not pose any new obligation. The increase of the minimum freezing capacity from 2 to 2.6 kg/24h is therefore not acceptable. It is true that the freezing capacity definition and four-star requirements are currently inconsistent. However, this proposed modification corrects for this inconsistency in the wrong way, namely it increases significantly the four-star requirement for those products having the minimum amount of 2 kg/24h. It is quite well possible to amend the regulation without such a change in technical content. This can be done by leaving Annex I, point 4 and related point 37 unchanged, and rewording Annex IV point 1(i) as discussed further down in this table.
Annex IV point 1(h)	the specific freezing capacity is calculated as 12 times the light load weight, divided by the freezing time to bring the temperature of the light load from +25 to - 18 °C at an ambient temperature of 25 °C expressed in kg/12h and rounded to one decimal place; the light load weight is 3,5 kg per 100 litre of the compartment	the ~~**specific**~~ freezing capacity is calculated as ~~**12**~~ **24** times the light load weight, divided by the freezing time to bring the temperature of the light load from +25 to - 18 °C at an ambient temperature of 25 °C expressed in ~~**kg/12h**~~ **kg/24h** and rounded to one decimal place; ~~**the light load weight is 3,5 kg per 100 litre of the compartment volume of the frozen compartments, and shall be at least 2,0 kg**~~ **The**	See for a full motivation APPLiA's note on Freezing capacity (2020-06-30_Note_COLD_Amendment_ Freezing_Capacity). Abbreviated: a) Specific freezing capacity is not needed in the regulation. Referring only to freezing capacity simplifies the text and does not change any technical content.

	volume of the frozen compartments, and shall be at least 2,0 kg	**compartment light load shall be at least 3,5 kg/100 l of the volume of the compartment evaluated and shall be rounded up to the nearest 0,5 kg, except that in no case shall it be less than 2,0 kg. The total light load shall be 3,5 kg/100 l of the total volume of all compartments operating at -18°C (three and four stars). The total light load shall be rounded up to the nearest 0,5 kg, except that in no case shall it be less than 2,0 kg. The sum of the compartment light loads shall be higher than or equal to the total light load.**	b) The light load is not clearly defined in the regulation as well as in the standard. The proposed definition avoids ambiguities.
Annex IV, point 1(i)	for 4-star compartments, the specific freezing capacity shall be such that the freezing time to bring the temperature of the light load ~~(3,5 kg/100 l)~~ from +25 to - 18 °C at an ambient temperature of 25 °C, is smaller than or equal to 18,5 h;	for 4-star compartments, ~~**the specific freezing capacity shall be such that**~~ the freezing time to bring the temperature of the light load ~~**(3,5 kg/100 l)**~~ from +25 to - 18 °C at an ambient temperature of 25 °C, ~~**is smaller than or equal to 18,5 h s**~~**hall be such that the resulting freezing capacity complies with the requirement in Annex I, point 4 and Article 2 point 12**;	To correct an inconsistency in the Regulation See for a full motivation APPLiA's note on Freezing capacity (2020-06-30_Note_COLD_Amendment_ Freezing_Capacity). Abbreviated: The 3.5 kg/100 l can be interpreted in two different ways leading to the consistencies observed. If no direct requirement is put on the freezing time, this is avoided. Automatically 18.5 h results if tested with 3.5 kg/100l and 24 h if tested with the minimum light load of 2 kg.
Annex VI, bottom of Table 7	Additional information: The references of the harmonised standards or other reliable accurate and reproducible methods applied: A list of all equivalent models, including model identifiers:	~~Additional information:~~ ~~The references of the harmonised standards or other reliable accurate and reproducible methods applied:~~	Included in Annex VI, point 1 (b) and (d) to align the regulations

		~~A list of all equivalent models, including model identifiers:~~	
Annex IX, Table 8, verification tolerances for E16 and E32	E16, E32 The determined value (a) shall not be more than 10 % higher than the declared value.	E32 ~~The determined value (a) shall not be more than 10 % **or 16 Watt hour (Wh)** higher than the declared value**, whichever value is higher**~~ (the original text should remain unmodified, only E16 removed)	The values of E16 and E32 are very small. A 10% tolerance is not easy to achieve for these small values, therefore an absolute value is added. APPLiA recommend to physically verify only E32 and Annual Energy Consumption and removing the verification for E16 and Eaux (see row below). For E16 and Eaux the measured values can be very low and high power fluctuations during the measurement exist leading to additional measurement uncertainty. An acceptably low tolerance value cannot be defined for MSA lab verification. For this reason it is recommended to not physically verify Eaux and E16.
Annex IX, Table 8, verification tolerances for E_{aux}	Eaux The determined value[a] shall not be more than 10 % higher than the declared value.	~~Eaux~~ ~~The determined value[a] shall not be more than 10 % higher than the declared value~~.	Eaux should not be physically verified - see comment above, so this row should be removed

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APPLiA also recommend modifying Table 6, Table 7 and Table 8 as follows:

Table 6

Product Information Sheet

Supplier's name or trade mark[1]:			
Supplier's address[b][1]:			
Model identifier[1]:			
Type of refrigerating appliance[1]:			
Low-noise appliance:	[yes/no]	Design type:	[built-in/freestanding]
Wine storage appliance:	[yes/no]	Other refrigerating appliance:	[yes/no]
General product parameters:			

Parameter		Value	Parameter	Value
Overall dimensions (millimetre)[1]	Height	x	Total volume (dm^3 or l)	x
	Width	x		
	Depth	x		

Commented [A13]: APPLIA This footnote will solve the issue of the equivalence model already mentioned by APPLiA in the last months.

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EEI	x	Energy efficiency class	[A/B/C/D/E/F/G] (c)
Airborne acoustical noise emissions (dB(A) re 1 pW)	x	Airborne acoustical noise emission class	[A/B/C/D] (c)
Annual energy consumption (kWh/a)	x ~~x,xx~~	Climate class:	[extended temperate/temperate/ subtropical/tropical]
Minimum ambient temperature (°C), for which the refrigerating appliance is suitable	x (c)	Maximum ambient temperature (°C), for which the refrigerating appliance is suitable	x (c)
Winter setting	[yes/no]		

Compartment Parameters:

Compartment type	Compartment parameters and values			
	Compartment Volume (dm3 or l)	Recommended temperature setting for	Freezing capacity (kg/24 h)	Defrosting type (auto-defrost = A, manual defrost = M)

Commented [A14]: APPLIA Replace with integer. In the calculation (Annex IV) AE should remain with two digits to keep the EEI calculation accurate. However, in the PIS and TD it should be integer as this avoids inconsistencies

			optimised food storage (°C) These settings shall not contradict the storage conditions set out in Annex		
Pantry	[yes/no]	x,x	x	-	[A/M]
Wine storage	[yes/no]	x,x	x	-	[A/M]
Cellar	[yes/no]	x,x	x	-	[A/M]
Fresh food	[yes/no]	x,x	x	-	[A/M]
Chill	[yes/no]	x,x	x	-	[A/M]
0-star or ice-making	[yes/no]	x,x	x	-	[A/M]
1-star	[yes/no]	x,x	x	-	[A/M]
2-star	[yes/no]	x,x	x	-	[A/M]
3-star	[yes/no]	x,x	x	-	[A/M]
4-star	[yes/no]	x,x	x	x,xx	[A/M]
2-star section	[yes/no]	x,x	x	-	[A/M]

Variable temperature compartment	compartment types	x,x	x (for each compartment type)	x,xx (for 4-star compartments) or -	[A/M]
For 4-star compartments					
Fast freeze facility			[yes/no]		
For wine storage appliances					
Number of standard wine bottles			x		
Light source parameters [(a) (b):]					
Type of light source			[Lighting Technology used]		
Energy efficiency class			[A/B/C/D/E/F/G]		
Minimum duration of the guarantee offered by the supplier[b] [1]:					
Additional information[1]:					
Weblink to the supplier's website, where the information in point 4 Annex II of Commission Regulation (EU) 2019/2019 [(1) (b)] is found[1]:					

[1] This item shall not be considered relevant for the purposes of Article 2(6) of Regulation (EU) 2017/1369

(a) as determined in accordance with Commission Delegated Regulation (EU) 2019/2015 (2).

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

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

Commented [A15]: APPLIA: Volume and defrosting type are always the same for each compartment type. There is no need to repeat this data for each compartment type. Only the recommended temperature setting shall be given for each compartment type.

Commented [A16]: APPLIA: In order to clarify and keep the requirement "simple," we recommend to provide only the "Lighting technology used," that is "[HL/LFL T5 HE/LFL T5 HO/CFLni/other FL/HPS/MH/other HID/LED/OLED/mixed/other] rather than the whole information set out in the Lighting Regulation 2019/2015 [type].

Commented [A17]: APPLIA: All the other delegated act refers to 'supplier' and not 'manufacturer'. We recommend aligning this wording among the delegated acts.

Commented [A18]: APPLIA There is no number of the Annex to the ED (which we believe is Annex II) and it should refer to point 4 and not specifically to point 4(a)

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Table 7: Additional information to be included in the technical documentation

A general description of the refrigerating model, sufficient for it to be unequivocally and easily identified:			
Product specifications:			
General product specifications:			
Parameter	Value	Parameter	Value
Annual energy consumption (kWh/a)[2(a)]	x	Auxiliary energy (kWh/a)[1]	x
Standard annual energy consumption (kWh/a)[2(b)]	x,xx	EEI (%)[2(c)]	x
Temperature rise time (h)	x,xx	Combi parameter[2(d)]	x,xx
Door heat loss factor	x,xxx	Load factor	x,x
Anti-condensation heater type	[manual on-off/ambient/other/none]	Internal humidity of wine storage appliances (%)	[range][3]
Airborne acoustical noise emissions (dB(A) re 1 pW)	x	Number of bottles / Bottles capacity	x
Additional product specifications for refrigerating appliances, except for low noise refrigerating appliances:			

Commented [A19]: APPLIA: Same comment in PIS on AE – Replace with integer. In the calculation (Annex IV) AE should remain with two digits to keep the EEI calculation accurate. However, in the PIS and TD it should be integer as this avoids inconsistencies

Parameter	Value	Parameter	Value
Daily energy consumption at 16 °C (kWh/24h)[1]	x,xxx	Daily energy consumption at 32 °C (kWh/24h)[2(e)]	x,xxx

Additional product specifications for low noise refrigerating appliances:

Parameter	Value	Parameter	Value
Daily energy consumption at 25 °C (kWh/24h)[1]	x,xxx	~~Defrost interval[a] at 25 °C (h)~~	

Compartment specifications:

	Compartment parameters and values							
Compartment type	Target temperature (°C)	Compartment Volume (dm3 or l)	Thermodynamic parameter (r_c)	N_c	M_c	Defrost factor (A_c)	Built-in factor (B_c)	Freezing capacity (kg/24 h)
Pantry	x	x,x	x,xx	x	x,xx	x,xx	x,xx	n.a
Wine storage	x	x,x	x,xx	x	x,xx	x,xx	x,xx	n.a
Cellar	x	x,x	x,xx	x	x,xx	x,xx	x,xx	n.a

Commented [A20]: APPLIA: We recommend removing Incremental defrost and recovery and defrost interval are removed (both at 16 and 32 C) for the following reason:

The daily energy is calculated on the basis of the steady state energy and, for each defrost system, the incremental defrost energy and the defrost interval". As several of these elements are not included in the table, no calculation can be checked. Further, as these parameters are not included in the verification table, these parameters serve no further purpose and removal from Table 7 is recommended.

Deleted: Incremental defrost and recovery energy consumption[a] at 16 °C (Wh)

Deleted: incremental defrost and recovery energy consumption[a] at 32 °C (Wh)

Deleted: Defrost interval[a] at 16 °C (h)

Deleted: Defrost interval[a] at 32 °C (h)

Commented [A22]: APPLIA: Defrost interval is meaningful for low noise appliances.

Commented [A23]: APPLIA: As declared values shall only be found in the TD, the compartment volumes are also required here. The values in the PIS are for product information only.

Fresh food	x	x,x	x,xx	x	x,xx	x,xx	x,xx	n.a
Chill	x	x,x	x,xx	x	x,xx	x,xx	x,xx	n.a
0-star or ice making	x	x,x	x,xx	x	x,xx	x,xx	x,xx	n.a
1-star	x	x,x	x,xx	x	x,xx	x,xx	x,xx	n.a
2-star	x	x,x	x,xx	x	x,xx	x,xx	x,xx	n.a
3-star	x	x,x	x,xx	x	x,xx	x,xx	x,xx	n.a
4-star	x	x,x	x,xx	x	x,xx	x,xx	x,xx	x,xx
2-star section	x	x,x	x,xx	x	x,xx	x,xx	x,xx	n.a
Variable temperature compartment	x	x,x	x,xx	x	x,xx	x,xx	x,xx	x,xx (for 4-star compartment type)
Total volume (dm3 or l)[2(f)]		x						

[1] the value of this parameter is not subject to verification according to ANNEX IX 2(c)

[2(a)] The value of this parameter is verified according to ANNEX IX 2(c) by comparing it to the determined value, and by verifying the correctness of the calculation carried out with the declared values according to Annex IV.

[2(b)] The value of this parameter is verified by verification of V and V_c according to ANNEX IX 2(c) and by verifying the correctness of the calculation with the declared values according Annex IV.4a.

[2(c)] This value of this parameter is verified by verification of AE and SAE, and by verification of the correctness of the calculation according to ANNEX IV 5.

[2(d)] The value of this parameter is verified by verification of V and V_c according to ANNEX IX 2(c) and by verifying the correctness of the calculation with the declared values according Annex IV. Table 4.

[2(e)] The value of this parameter is verified according to ANNEX IX 2(c) by comparing it to the determined value of E32

[2(f)] The value of this parameter is verified by verification of V_c according to ANNEX IX 2(c) and by verifying the correctness of the calculation with the declared values according Annex IV.4a.

[3] The range shall be smaller or equal to the range specified in Article 2.26

ANNEX IX

Table 8

Parameters for physical verification of conformity and the respective verification tolerances

Parameters	Verification
Total volume and compartment volume	The determined value[a] shall not be more than 3 % or 1 litre lower — whichever is the greater value — than the declared value.
Freezing capacity	The determined value[a] shall not be more than 10 % lower than the declared value.
~~E_{16}~~ E_{32}	The determined value[a] shall not be more than 10 % higher than the declared value.
~~E_{aux}~~	~~The determined value[a] shall not be more than 10 % higher than the declared value.~~

Deleted: Verification tolerances

Commented [A24]: APPLiA Remove E16 and Eaux as explained above.

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Annual energy consumption	The determined value[a] shall not be more than 10 % higher than the declared value.
Internal humidity of wine storage appliances (%)	The determined value[a] shall not differ from the declared range by more than 10 %[b].
Airborne acoustical noise emissions	The determined value[a] shall not be more than 2 dB(A) re 1 pW more than the declared value.
Temperature rise time	The determined value[a] shall not be more than 15 % lower than the declared value.

[a] in the case of three additional units tested as prescribed in point 4, the determined value means the arithmetic mean of the values determined for these three additional units.

[b] The maximum declared range is specified in Article 2.26 of (EU) Reg 2019/2016

Commented [A25]: APPLIA This change is proposed in line with footnote 3 of table 7

2.5. Commission Delegated Regulation (EU) 2019/2017 supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of household dishwashers and repealing Commission Delegated Regulation (EU) No 1059/2010

Provision	Current text	Amended text	Rationale
Recital 14	The relevant product parameters should be measured using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	The relevant product parameters should be measured **or calculated** using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	Some product parameters are not measured but calculated. This text is standard.
Annexe II, Table 1		Table 1 is modified, see below: The title of the table has been reworded.	Typological error
Annex IV, Point 2	2. CLEANING PERFORMANCE INDEX For the calculation of the cleaning performance index (IC) of a household dishwasher model, the cleaning performance of the eco programme is compared to the cleaning performance of a reference dishwasher.	2. CLEANING PERFORMANCE INDEX For the calculation of the cleaning performance index (IC) of a household dishwasher model, the cleaning performance of the eco programme is compared to the cleaning performance of a reference dishwasher.	This modification is necessary to be consistent with other products regulation amendments (e.g. Washing Efficiency Index for WM-WD). A precision of three decimals is necessary for the verification of compliance with the ecodesign requirement.

Commented [A26]: APPLIA In 2019/2017 the cited text is in recital 13, not 14

	The IC is calculated as follows and rounded to two decimal places: IC = exp (ln IC) and ln IC=(1/n)×Σi=1nln(CT,i/CR,i) where: CT,i is the cleaning performance of the eco programme of the household dishwasher under test for one test run (i), rounded to two decimal places; CR,i is the cleaning performance of the reference dishwasher for one test run (i), rounded to two decimal places; n is the number of test runs.	The IC is calculated as follows and rounded to ~~two~~ **three** decimal places: IC = exp (ln IC) and ln IC=(1/n)×Σi=1nln(CT,i/CR,i) where: CT,i is the cleaning performance of the eco programme of the household dishwasher under test for one test run (i), rounded to ~~two~~ **three** decimal places; CR,i is the cleaning performance of the reference dishwasher for one test run (i), rounded to ~~two~~ **three** decimal places; n is the number of test runs.	
Annex IV, Point 3	3. DRYING PERFORMANCE INDEX For the calculation of the drying performance index (ID) of a household dishwasher model, the drying performance of the eco programme is compared to the drying performance of the reference dishwasher. The ID is calculated as follows and rounded to two decimal places: ID = exp (ln ID) and ln ID=(1/n)×Σi=1nln(ID,i) where: ID,i is the drying performance index of the eco programme of the household dishwasher under test for one test run (i);	3. DRYING PERFORMANCE INDEX For the calculation of the drying performance index (ID) of a household dishwasher model, the drying performance of the eco programme is compared to the drying performance of the reference dishwasher. The ID is calculated as follows and rounded to ~~two~~ **three** decimal places: ID = exp (ln ID) and ln ID=(1/n)×Σi=1nln(ID,i) where: ID,i is the drying performance index of the eco programme of the household dishwasher under test for one test run (i);	This modification is necessary to be consistent with other products regulation amendments (e.g. Washing Efficiency Index for WM-WD). A precision of three decimals is necessary for the verification of compliance with the ecodesign requirement.

	n is the number of combined cleaning and drying test runs. The ID,i is calculated as follows and rounded to two-decimal places: ln ID,i = ln (DT,i/DR,t) where: DT,i is the average drying performance score of the eco programme of the household dishwasher under test for one test run (i), rounded to two decimal places; DR,t is the target drying score of the reference dishwasher, rounded to two decimal places.	n is the number of combined cleaning and drying test runs. The ID,i is calculated as follows and rounded to ~~two~~ **three** decimal places: ln ID,i = ln (DT,i/DR,t) where: DT,i is the average drying performance score of the eco programme of the household dishwasher under test for one test run (i), rounded to ~~two~~ **three** decimal places; DR,t is the target drying score of the reference dishwasher, rounded to ~~two~~ **three** decimal places.	
Annex V, Table 3		Table 3 is modified: see below	Three modifications: 1. To solve the issue of the equivalence of models for EPREL, we propose to add a footnote for the items that shall not be considered relevant for the purposes of Article 2 (6) of Regulation (EU) 2017/1369. 2. A decimal to the parameters for Cleaning and Drying performance was added (three decimals) in line with the rationale for Washing Efficiency Index for WM-WD

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			3. For off-mode and standby mode, the term "(if applicable)" was added in line with ED 2019/2022 Annex II 4. (a): *"household dishwashers shall have an off-mode or standby mode or both"*
Annex VI, Table 4		Table 4 is modified, see below: The title of the table has been reworded.	
Annex IX, point 7	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.	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 **the second paragraph** of this Annex **or** points 3 ~~and~~ **or** 6.	This point should be modified to include the non-compliance for the circumvention (in paragraph 2 of this Annex); if not, this specific non-compliance will not be subject to a mandatory reporting to other MS and COM. In the ecodesign regulation, "or" is written and not "and"; "or" is correct because if only one of points 3 or 6 happens there should be a report to other MS and COM.

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Annexe II

(Amended) Table 1

~~Energy efficiency classes of electronic displays~~ **Energy efficiency classes of household dishwashers**

Energy efficiency class	Energy Efficiency Index

A	EEI < 32
B	32 ≤ EEI < 38
C	38 ≤ EEI < 44
D	44 ≤ EEI < 50
E	50 ≤ EEI < 56
F	56 ≤ EEI < 62
G	EEI ≥ 62

APPLiA recommends modifying also Table 3 in Annex V as follows:

Table 3

Content, order and format of the product information sheet

Supplier's name or trade mark[1]:			
Supplier's address [1][b]:			
Model identifier[1]:			
General product parameters:			
Parameter	Value	Parameter	Value

Commented [A27]: APPLIA This footnote will solve the issue of the equivalence model already advanced by APPLiA in the last months.

Rated capacity[a] (ps)	x	Dimensions in cm[1]	Height	x
			Width	x
			Depth	x
EEI[a]	x,x	Energy efficiency class[a]	[A/B/C/D/E/F/G][c]	
Cleaning performance index[a]	x,xxx	Drying performance index[a]	x,xxx	
Energy consumption in kWh [per cycle], based on the eco programme using cold water fill. Actual energy consumption will depend on how the appliance is used.	x,xxx	Water consumption in litres [per cycle], based on the eco programme. Actual water consumption will depend on how the appliance is used and on the hardness of the water.	x,x	
Programme duration ([a]) (h:min)	x:xx	Type	[built-in/free-standing]	

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Commented [A28]: APPLIA Same rationale as the one for adding a decimal to the Washing Effieincy Index for WM - WD

Commented [A29]: APPLIA Same rationale as the one for adding a decimal to the Washing Efficiency Index for WM - WD

Airborne acoustical noise emissions (a) (dB(A) re 1 pW)	x	Airborne acoustical noise emission class ([a])	[A/B/C/D][c]
Off-mode (W) (if applicable)	x,xx	Standby mode (W) (if applicable)	x,xx
Delay start (W) (if applicable)	x,xx	Networked standby (W) (if applicable)	x,xx
Minimum duration of the guarantee offered by the supplier [1][b]:			
Additional information[1]:			
Weblink to the supplier's website, where the information in point 6 of Annex II to Commission Regulation (EU) 2019/2022 (1) (b) is found[1]:			

(1) This item shall not be considered relevant for the purposes of Article 2 (6) of Regulation (EU) 2017/1369

(a) for the eco programme.

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

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

Commented [A30]: APPLIA: According to 2019/2022 (Ecodesign) ANNEX II 4. (a):
"household dishwashers shall have an off mode or a standby mode or both."

Commented [A31]: APPLIA: According to 2019/2022 (Ecodesign) ANNEX II 4. (a):
"household dishwashers shall have an off mode or a standby mode or both."

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Annex VI

(Amended) Table 4

~~Information to be included in the technical documentation~~ **Technical parameters of the model and their declared values for household dishwashers**

PARAMETER	**DECLARED VALUE**	UNIT
Eco programme energy consumption (EPEC) rounded to three decimal places	X,XXX	kWh/cycle
Standard programme energy consumption (SPEC) rounded to three decimal places[1]	X,XXX	kWh/cycle
Energy Efficiency Index (EEI)[2]	X,X	-
Eco programme water consumption (EPWC) rounded to one decimal place	X,X	l/cycle
Cleaning performance index (I_C)	X,XXX	-
Drying performance index (I_D)	X,XXX	-
Duration of the eco programme (T_t) rounded to the nearest minute	X:XX	h:min

Commented [A32]: APPLIA: Based on the stated (published) value of place settings on the Energy Label.

Commented [A33]: APPLIA See same comment made on the PIS – in line with WM-WD

Power consumption in off-mode (P_o) rounded to two decimal places (if applicable)	X,XX	W
Power consumption in standby mode (P_{sm}) rounded to two decimal places (if applicable)	X,XX	W
Does standby mode include the display of information?	Yes/No	-
Power consumption in standby mode (P_{sm}) in condition of networked standby (if applicable), rounded to two decimal places	X,XX	W
Power consumption in delay start (P_{ds}) (if applicable) rounded to two decimal places	X,XX	W
Airborne acoustical noise emissions	X	dB(A) re 1 pW

Commented [A34]: APPLIA According to 2019/2022 (Ecodesign) ANNEX II 4. (a):
"household dishwashers shall have an off mode or a standby mode or both."

Commented [A35]: APPLIA: According to 2019/2022 (Ecodesign) ANNEX II 4. (a):
"household dishwashers shall have an off mode or a standby mode or both."

[1] The verification of the value of this parameter is only performed to verify the correctness of the calculation according to ANNEX IV 1 (b)

[2] The value of this parameter is verified by verification of the values of the parameters EPEC and SPEC, and by verification of the correctness of the calculation according to ANNEX IV 1a.

2.6. Commission Delegated Regulation (EU) 2019/2018 supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of refrigerating appliances with a direct sales function

Provision	Current text	Amended text	Rationale
Recital 12	The relevant product parameters should be measured using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	The relevant product parameters should be measured **or calculated** using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	Some product parameters are not measured but calculated. This text is standard.
Annex III.1.2 VIII, for refrigerated vending machines, first dash	the temperature at the top: the maximum measured product temperature of the compartment(s) wit chilled operating temperatures, in degrees Celcius (°C) and rounded to the nearest integer, as set out in Table 4;	'- the temperature at the top: the maximum measured product temperature of the compartment(s) wit chilled operating temperatures, in degrees Celcius (°C) and rounded to the ~~nearest integer~~ **first decimal place**, as set out in Table 4;'	To address an inconsistency in the regulation
Annex IX, Second sentence	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	The values and classes on the label or in the **product** ~~fiche~~ **information sheet** shall not be more favourable for the supplier than the values reported in the technical documentation	Mistake in the wording

3. SPECIFIC AMENDMENT RELATED TO ECODESIGN

3.1. Commission Regulation (EU) 2019/1781 of 1 October 2019 laying down ecodesign requirements for electric motors and variable speed drives pursuant to Directive 2009/125/EC of the European Parliament and of the Council, amending Regulation (EC) No 641/2009 with regard to ecodesign requirements for glandless standalone circulators and glandless circulators integrated in products and repealing Commission Regulation (EC) No 640/2009

Provision	Current text	Amended text	Rationale
Art. 2	N / A – to add new point 4	(4) The ecodesign requirements shall not apply to the following motors: (a) (i) Electrical motors that are components or subassemblies of appliances covered by implementing measures adopted under Directive 2009/125/EU; (a) (ii) electrical motors that are components or subassemblies **or spare parts** of appliances **and which are not placed on the market and/or put into service for stand-alone use by end-users or the environmental performance of which cannot be assessed independently** ;	Motors included in home appliances are already regulated by specific regulations (e.g. the efficiency of the motor inside a washing machine is already regulated by (EU)2019/2023) This will also ensure that consumers will have access to spare parts in the long term enabling the reparability principle.
Annex I.2 point (1)	rated efficiency (η_N) at the full, 75 % and 50 % rated load ~~and voltage (U_N)~~, determined based on the 50 Hz operation and 25 °C ambient reference temperature, rounded to one decimal place;	rated efficiency (η_N) at the full, 75 % and 50 % rated load**, and rated voltage (U_N)**, determined based on the 50 Hz operation and 25 °C ambient reference temperature, rounded to one decimal place;	Correction of a mistake that was already present in the original regulation.
Penultimate paragraph of Annex I.4	The information referred to in points (1) and (2) as well as the year of manufacture shall be durably marked on or near the rating plate of the VSD. Where the size of the rating plate makes it impossible to mark all the information referred to in point (1) only the ~~rated efficiency~~ at (90;100) shall be marked.	The information referred to in points (1) and (2) as well as the year of manufacture shall be durably marked on or near the rating plate of the VSD. Where the size of the rating plate makes it impossible to mark all the information referred to in point (1) only the **power losses** at (90;100) shall be marked.	Current formulation is not consistent with the rest of the text: point (1) of Annex I.4 refers to power losses, not to rated efficiency.

The following paragraph is inserted before the last paragraph of Annex II.1		**However, for the seven operating points specified in Annex I.2 point (13), the losses shall be determined by either direct input-output measurement or by calculation.**	The method currently proposed in annex II.1 is not suited for the seven operating points specified in Annex I.2 point (13)
The following line of Annex I.1 is amended as follows	From 1 July 2021:	From 1 July 2021 **for all motors in scope, except for Ex eb increased safety motors with a rated output equal to or above 0,12 kW and equal to or below 1 000 kW, with 2, 4, 6 or 8 poles, and for single-phase motors with a rated output equal to or above 0,12 kW, for which the date is 1 July 2023**:	Align the date of entry of application of the information requirements with that of the energy efficiency requirements
The following sentence in Annex I.1 is updated:	Energy efficiency for motors, expressed in International Energy efficiency classes (IE), is set out in Tables 1, 2 and 3, for different values of the motor rated output power P_N. IE classes are determined at rated output power (P_N), rated voltage (U_N), based on the 50 Hz operation and 25 °C ambient reference temperature.	Energy efficiency ~~for~~ **of** motors, expressed in International Energy efficiency classes (IE), is set out in Tables 1 **to 6**~~, 2 and 3,~~ for different values of the motor rated output power P_N**, at 50 Hz or 60 Hz**. IE classes are determined at rated output power (P_N), rated voltage (U_N), and based on~~ the 50 Hz operation and~~ 25 °C ambient reference temperature. For 50/60 Hz motors, the requirements above shall be met at both 50 Hz and 60 Hz.	Allowing 60 Hz motors to be tested at 60Hz, and clarify which requirement apply in the case of 50/60 Hz motors (motors rated for both frequencies).
Minimum efficiencies tables for 60 Hz motors are added to Annex I.1, and numbering of all tables is updated		[Add minimum efficiencies tables for 60 Hz motors to Annex I.1, and update numbering of all tables]	

The following text is added at the end of Annex I.1, just before the last sentence.		To determine the minimum efficiency of 60 Hz motors at a rated power not provided in Tables 4, 5 and 6, the following rule shall be used: - The efficiency of a rated power at or above the midpoint between 2 consecutive values from the tables shall be the highest of the two efficiencies. - The efficiency of a rated power below the midpoint between 2 consecutive values from the tables shall be the lowest of the two efficiencies.	Interpolation rule for 60Hz motors, adapted from the standard.
Annex I.2 point (1)	(1) rated efficiency (η_N) at the full, 75 % and 50 % rated load and voltage (U_N), determined based on the 50 Hz operation and 25 °C ambient reference temperature, rounded to one decimal place;	(1) rated efficiency (η_N) at the full, 75 % and 50 % rated load and voltage (U_N), determined based on ~~the 50 Hz operation and~~ 25 °C ambient reference temperature, rounded to one decimal place;	Allowing 60 Hz motors to be tested at 60Hz
In Annex I.2, update the following sentence	~~For 50/60 Hz and 60 Hz motors, the information set out in points (1) and (2) above may be provided for the 60 Hz operation in addition to the values at 50 Hz, with clear indication of the applicable frequencies.~~	For 50 Hz and 60 Hz motors, the data set out above is provided at the applicable frequency, while for 50/60 Hz motors the relevant data is to be provided at both frequencies.	Clarify which information is to be provided for which motor (50 Hz, 60 Hz, and 50/60 Hz)
Annex II – Measurement method and calculation			APPLiA recommends clarifying that motors have to be tested on a test bench (and not in the machine in which they are integrated) at an ambient temperature of 25°C. We take for granted that motors have to be dismounted from the appliance in which they are built-in to perform the energy efficiency test and that the test is done on a test bench at an ambient temperature of 25°C. Nevertheless, we would welcome a clarification in the regulation.

In annex II.1, the following sentence is deleted:	~~For 60 Hz motors, equivalent values of the rated output power (P_N) and rated voltage (U^N) for the 50 Hz operation shall be calculated based on the values applicable at 60 Hz.~~		Allowing 60 Hz motors to be tested at 60Hz (sentence not needed any more).

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3.2. Commission Regulation (EU) 2019/2019 of 1 October 2019 laying down ecodesign requirements for refrigerating appliances pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulation (EC) No 643/2009

Provision	Current text	Amended text	Rationale
Article 2, point 22	'freezing capacity' means the amount of fresh foodstuffs that can be frozen in a freezer compartment in 24 h; it shall not be lower than 4,5 kg per 24 h per 100 litres of volume of the freezer compartment, with a minimum of ~~2,0~~ kg/24 h;'	'freezing capacity' means the amount of fresh foodstuffs that can be frozen in a freezer compartment in 24 h; it shall not be lower than 4,5 kg per 24 h per 100 litres of volume of the freezer compartment, with a minimum of **2,0**~~**6**~~ kg/24 h;' Item should remain unchanged, so left at 2.0 kg/24h	To correct an inconsistency in the Regulation As clarified by the commission, the amendment shall not pose any new obligation. The increase of the minimum freezing capacity from 2 to 2.6 kg/24h is therefore not acceptable. It is true that the freezing capacity definition and four-star requirements are currently inconsistent. However, this proposed modification corrects for this inconsistency in the wrong way, namely it increases significantly the four-star requirement for those products having the minimum amount of 2 kg/24h. It is quite well possible to amend the regulation without such a change in technical content. This can be done by leaving Article 2, point 22 unchanged, but rewording Annex IV point 1(i) as discussed further down in this table
Article 2, point 28	'mobile refrigerating appliance' means a refrigerating appliance that can be used where there is no access to the mains electricity grid and that uses extra low-voltage electricity (< 120V DC) or fuel or both as the energy source for the refrigeration functionality, including a	No proposal	One manufacturer and some Member States have raised their concerns with '*An appliance placed on the market with an AC/DC converter is not a mobile refrigerating appliance*;'

	refrigerating appliance that, in addition to extra low voltage electricity or fuel, or both, can be electric mains operated. *An appliance placed on the market with an AC/DC converter is not a mobile refrigerating appliance*;		This was included to close a potential loophole and introduced by IT during the regulatory committee. The manufacturer claims that some appliances, i.e. mobile refrigerating appliances with fan and integrated AC/DC converter' are now unintentionally in the scope of the regulation and have to comply with requirements they cannot meet. IT is against changing the definition; they state that their manufacturers already adapted their products.
Article 6	The manufacturer, importer or authorised representative shall not place on the market products designed to be able to detect they are being tested (e.g. by recognising the test conditions or test cycle), and to react specifically by automatically altering their performance during the test with the aim of reaching a more favourable level for any of the parameters declared by the manufacturer, importer or authorised representative in the technical documentation or included in any of the documentation provided. The energy consumption of the product and any of the other declared parameters shall not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user prior to update.	The manufacturer, importer or authorised representative shall not place on the market products designed to be able to detect they are being tested (e.g. by recognising the test conditions or test cycle), and to react specifically by automatically altering their performance during the test with the aim of reaching a more favourable level for any of the parameters declared by the manufacturer, importer or authorised representative in the technical documentation or included in any of the documentation provided. The energy consumption of the product and any of the other declared parameters shall not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user prior to update**. No**	Alignment with other regulations

		performance change shall occur as result of rejecting the update. **A software update shall never have the effect of changing the product's performance in a way that makes it non-compliant with the ED requirements applicable for declaration of conformity'**	
Annex II, point 2(f)	For 4-star compartments, the specific freezing capacity shall be such that the freezing time to bring the temperature of the light load ~~(3,5 kg/100 l)~~ from +25 to - 18 °C at an ambient temperature of 25 °C, is smaller than or equal to 18,5 h.	For 4-star compartments, ~~the specific freezing capacity shall be such that~~ the freezing time to bring the temperature of the light load ~~(3,5 kg/100 l)~~ from +25 to - 18 °C at an ambient temperature of 25 °C, ~~is smaller than or equal to 18,5 h~~ **shall be such that the resulting freezing capacity complies with the requirement in Annex I, point 4 and Article 2 point 12**;	To correct an inconsistency in the Regulation See for a full motivation Re/genT note 20227 / CE37 / V1. Abbreviated: The 3.5 kg/100 l can be interpreted in two different ways leading to the consistencies observed. If no direct requirement is put on the freezing time, this is avoided. Automatically 18.5 h results if tested with 3.5 kg/100l and 24 h if tested with the minimum light load of 2 kg.
Annex III, point 1(h)	the specific freezing capacity is calculated as 12 times the light load weight, divided by the freezing time to bring the temperature of the light load from +25 to -18 °C at an ambient temperature of 25 °C expressed in kg/12 h and rounded to one decimal place; the light load weight is 3,5 kg per 100 litre of the compartment volume of the frozen compartments, and shall be at least 2,0 kg;	the ~~specific~~ freezing capacity is calculated as ~~12~~ **24** times the light load weight, divided by the freezing time to bring the temperature of the light load from +25 to - 18 °C at an ambient temperature of 25 °C expressed in ~~kg/12h~~ **kg/24h** and rounded to one decimal place; ~~the light load weight is 3,5 kg per 100 litre of the compartment volume of the frozen compartments, and shall be at least 2,0 kg.~~ **The compartment light load shall be at least 3,5 kg/100 l of the volume of the compartment evaluated and shall be rounded up to the nearest 0,5 kg, except that in no case shall it be less than 2,0 kg.**	See for a full motivation Re/genT note 20227 / CE37 / V1. Abbreviated: a. Specific freezing capacity is not needed in the regulation. Referring only to freezing capacity simplifies the text and does not change any technical content. b. The light load is not clearly defined in the regulation as well as in the standard. The proposed definition avoids ambiguities.

		The total light load shall be 3,5 kg/100 l of the total volume of all compartments operating at -18°C (three and four stars). The total light load shall be rounded up to the nearest 0,5 kg, except that in no case shall it be less than 2,0 kg. The sum of the compartment light loads shall be higher than or equal to the total light load.	
Annex IV, Table 6, verification tolerances for E16 and E32	E16, E32 The determined value (a) shall not be more than 10 % higher than the declared value.	E32 ~~The determined value (a) shall not be more than 10 %~~ **~~or 16 Watt hour (Wh)~~** ~~higher than the declared value~~**~~, whichever value is higher~~** the original text should remain unmodified, only E16 removed)	The values of E16 and E32 are very small. A 10% tolerance is not easy to achieve for these small values, therefore an absolute value is added. APPLiA recommends to physically verify only E32 and Annual Energy Consumption and removing the verification for E16 and Eaux (see row below). For E16 and Eaux the measured values can be very low and high power fluctuations during the measurement exist leading to additional measurement uncertainty. An acceptably low tolerance value cannot be defined for MSA lab verification. For this reason, it is recommended to not physically verify Eaux and E16.
Annex IX, Table 8, verification tolerances for E_{aux}	Eaux The determined value[a] shall not be more than 10 % higher than the declared value.	~~Eaux~~ ~~The determined value[a] shall not be more than 10 % higher than the declared value~~.	Eaux should not be physically verified - see comment above, so this row should be removed

3.3. Commission Regulation (EU) 2019/2020 of 1 October 2019 laying down ecodesign requirements for light sources and separate control gears pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulations (EC) No 244/2009, (EC) No 245/2009 and (EU) No 1194/2012

Provision	Current text	Amended text	Rationale
Article 2, point (4)	'containing product' means a product containing one or more light sources, or separate control gears, or both. Examples of containing products are luminaires that can be taken apart to allow separate verification of the contained light source(s), household appliances containing light source(s), furniture (shelves, mirrors, display cabinets) containing light source(s). If a containing product cannot be taken apart for verification of the light source and separate control gear, the entire containing product is to be considered a light source;	'containing product' means a containing product for light sources or a containing product for separate control gears or both. 'containing product for light sources' means a product containing one or more light sources, from which all contained light sources can be removed for verification, such as . luminaires that can be taken apart to allow separate verification of the contained light source(s), household appliances containing light source(s), furniture (shelves, mirrors, display cabinets) containing light source(s). 'containing product for separate control gears' means a product containing one or more separate control gears, from which all contained separate control gears can be removed for verification. Examples of 'containing products for light sources' are luminaires that can be taken apart to allow separate verification of the contained	The current definition of 'containing products' might create legal uncertainty when correlated with other definitions (e.g. of light sources). The updated definition also aims to clarify that some products, e.g. fridges or dishwashers should not be seen as light sources. We welcome the attempt to modify the definition of containing product which now clarifies from legal point of view that an appliance can never be considered as light source for verification purpose. Nevertheless, we still see a possible conflict with Article 4 – we don't understand the meaning and the added value of the sentence highlighted in yellow when considering it together with Art. 4. The above comment is valid also for the definition of 'containing product for separate control gear' and for the examples.

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		light source(s), household appliances containing light source(s), furniture (shelves, mirrors, display cabinets) containing light source(s).	We believe that the definitions are clearer and easier to understand if the highlighted text is removed.
Article 2 point 2 (add a paragraph)	‘control gear’ means one or more devices, that may or may not be physically integrated in a light source, intended to prepare the mains for the electric format required by one or more specific light sources within boundary conditions set by electric safety and electromagnetic compatibility. It may include transforming the supply and starting voltage, limiting operational and preheating current, preventing cold starting, correcting the power factor and/or reducing radio interference. The term ‘control gear’ does not include power supplies within the scope of Commission Regulation (EC) No 278/2009 (14). The term also does not include lighting control parts and non-lighting parts (as defined in Annex I), although such parts may be physically integrated with a control gear or marketed together as a single product. A Power over Ethernet (PoE) switch is not a control gear in the sense of this Regulation. ‘Power-over-Ethernet switch’ or ‘PoE switch’ means equipment for power-supply and data-handling that is installed between the mains and office equipment and/or light sources for the purpose of data transfer and power supply;	‘control gear’ means one or more devices, that may or may not be physically integrated in a light source, intended to prepare the mains for the electric format required by one or more specific light sources within boundary conditions set by electric safety and electromagnetic compatibility. It may include transforming the supply and starting voltage, limiting operational and preheating current, preventing cold starting, correcting the power factor and/or reducing radio interference. The term ‘control gear’ does not include power supplies within the scope of Commission Regulation (EC) No 278/2009 (14). The term also does not include lighting control parts and non-lighting parts (as defined in Annex I), although such parts may be physically integrated with a control gear or marketed together as a single product. A Power over Ethernet (PoE) switch is not a control gear in the sense of this Regulation. ‘Power-over-Ethernet switch’ or ‘PoE switch’ means equipment for power-supply and data-handling that is installed between the mains and office equipment and/or light sources for the purpose of data transfer and power supply;	This follows the discussion in the Consultation Forum where it was pointed out that control gear as component or sub-assemblies are already excluded from the Regulation. This should be clarified in the legal text as well.

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		Control gears that are embedded in control boards that regulate other functions of containing products, are components or sub-assemblies as defined in Article 2 point 2 of the Ecodesign Directive (2009/125).	
Article 7	The manufacturer, importer or authorised representative shall not place on the market products designed to be able to detect they are being tested (e.g. by recognising the test conditions or test cycle), and to react specifically by automatically altering their performance during the test with the aim of reaching a more favourable level for any of the parameters declared by the manufacturer, importer or authorised representative in the technical documentation or included in any of the documentation provided. The energy consumption of the product and any of the other declared parameters shall not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user prior to the update.	The manufacturer, importer or authorised representative shall not place on the market products designed to be able to detect they are being tested (e.g. by recognising the test conditions or test cycle), and to react specifically by automatically altering their performance during the test with the aim of reaching a more favourable level for any of the parameters declared by the manufacturer, importer or authorised representative in the technical documentation or included in any of the documentation provided. The energy consumption of the product and any of the other declared parameters shall not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user prior to the update. **No performance change shall occur as result of rejecting the update.** **A software update shall never have the effect of changing the product's performance in a way that makes it non-compliant with the**	Alignment with other regulations

		ecodesign requirements applicable for the declaration of conformity.	
Annex II, point 2, Table 4	Strobos copic effect for LED and OLED MLS: SVM ≤ 0,4 at full-load (except for HID with Φuse > 4 klm and for light sources intended for use in outdoor applications, industrial applications or other applications where lighting standards allow a CRI< 80)	Stroboscopic effect for LED and OLED MLS: SVM ≤ 0,9 at full-load (except for light sources intended for use in outdoor applications, industrial applications or other applications where lighting standards allow a CRI < 80) From 1 September 2023: SVM ≤ 0,4 at full-load (except for light sources intended for use in outdoor applications, industrial applications or other applications where lighting standards allow a CRI < 80)	Proposal to amend the limit value for stroboscopic effect, which industry considers technically impossible to achieve for several types of light sources. The proposal builds on the text in the regulation adopted, as well as on the further evidence made available through the testing carried out by the MS and suppliers of light sources.
Annex II, point 3(d)(1)	The information specified in point 3(c)(2) of this Annex shall also be contained in the technical documentation file drawn up for the purposes of conformity assessment pursuant to Article 8 of Directive 2009/125/EC.	The information specified in point 3(c)(1) of this Annex shall also be contained in the technical documentation file drawn up for the purposes of conformity assessment pursuant to Article 8 of Directive 2009/125/EC.	To correct an erroneous reference (to a wrong point in art. 3)
Annex III – point 1 new letter (x)	N / A – to add	(x)Annex II 3.(a) and (b)1 of Ecodesign Regulation (EU)2019/2020 shall not apply to: (x)(i) light sources that are designed to operate exclusively within containing products whose primary purpose is not lighting and the product	We do not see any additional value of having the information requirements for specifically designed light sources used in appliances and sold as spare parts.

		is dependent on energy input in fulfilling its primary purpose during use, e.g. household appliances. (x)(ii) light sources placed on the market as spare parts, which can be used only in specific products and that cannot be used individually by the end-user for other purposes.	The specifically designed light sources and their spare parts cannot be used for any other applications except the appliance. Therefore, this additional requirement will not bring any added value to consumers neither from an energy saving point of view nor from an informative one.
Annex III, point 1(c)	in radiological and nuclear medicine installations, as defined in Article 3 of Council Directive 2009/71/EURATOM ([3]) (Footnote 3) Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations (OJ L 172, 2.7.2009, p. 18).	in radiological and nuclear medicine installations that are subject to radiation safety standards as set out in Council Directive **2013/59/**EURATOM ([3]); **([3]) Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation (OJ L 13, 17.1.2014, p. 1).**	To correct an erroneous reference (to a wrong EURATOM Directive)
Annex III, point 2, new letter	N/A	(f) separate control gears specifically used in products covered by the Standby Regulation 1275/2008 and its amendments, and/or by specific ecodesign requirements ([16]). (g) Control gears placed on the market as spare parts, which can be used only in specific products according to Annex III point 2(f) and that cannot be used individually by the end-user for other purposes. ([16]) Examples: Commission Regulation (EU) 2019/2022 of 1 October 2019 laying down ecodesign requirements for household	To insert an exemption for separate control gears that are components of household appliances, as proposed by Applia. These control gears are in a special situation because: (i) their energy efficiency is part of the overall energy efficiency of products that are already regulated; and

Commented [A37]: Could be seen as 'components and sub-assemblies', therefore no exemption would be necessary.

Commented [A38R37]: APPLIA: We stress the need to clarify this point and this understanding also in the legal text (see our proposal above in Article 2 point 2 in the ED).

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refrigerating appliances as defined in Commission Regulation (EU) 2019/2019([16a]), dishwashers as defined in Commission Regulation (EU) 2019/2022([16b]), washing machines and washer-dryers as defined in Commission Regulation (EU) 2019/2023([16c]), refrigerating appliances with a direct sales function as defined in Commission Regulation (EU) 2019/2024([16d]), domestic ovens, hobs and range hoods as defined in Commission Regulation (EU) No 66/2014([16e]).¶
¶
([16a]) Commission Regulation (EU) 2019/2019 of 1 October 2019 laying down ecodesign requirements for refrigerating appliances pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulation (EC) No 643/2009 (OJ L 315, 5.12.2019, p. 187).¶
([16b])

		dishwashers pursuant to Directive 2009/125/EC of the European Parliament and of the Council amending Commission Regulation (EC) No 1275/2008 and repealing Commission Regulation (EU) No 1016/2010 (OJ L 315, 5.12.2019, p. 267); and Commission Regulation (EU) No 66/2014 of 14 January 2014 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for domestic ovens, hobs and range hoods (OJ L 29, 31.1.2014, p. 33).	(ii) the control gears are physically a part of bigger integrated control boards that regulate other functions of the white goods. Thus, it is hard to separate and measure/test the components that control the light sources. APPLiA strongly welcomes the introduction of this exemption. Nevertheless, to be in line with the rationale provided by the Commission, we recommend to also add a reference to the Standby regulation (see our proposal in the text). Moreover, non-specific wording in the legislation would ensure that when new future ecodesign product specific legislation is created, the Commission would not need to amend this article in the lighting regulation every time.
Annex III, point 3(s)	halogen light sources with blade contact-, metal lug-, cable-, litz wire- or non-standard customised electrical interface, specifically designed and marketed for industrial or professional electro-heating equipment (e.g. stretch blow-moulding process in PET-Industry, 3D-printing, gluing, inks, paint and coating hardening);	In Annex III, point 3(s) is replaced by the following: **Incandescent light sources with** blade contact-, metal lug-, cable-, litz wire- or non-standard customised electrical interface, encasing made from quartz-glass tubes, specifically designed and marketed for industrial or professional electro-heating equipment (e.g. stretch blow-moulding process in PET-Industry, 3D-printing, **photovoltaic and electronic manufacturing processes, drying or hardening of adhesives,** inks, paints or coatings);	To clarify a definition and make it more specific, as proposed by industry stakeholders.

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([16c]) Commission Regulation (EU) 2019/2023 of 1 October 2019 laying down ecodesign requirements for household washing machines and household washer-dryers pursuant to Directive 2009/125/EC of the European Parliament and of the Council, amending Commission Regulation (EC) No 1275/2008 and repealing Commission Regulation (EU) No 1015/2010 (OJ L 315, 5.12.2019, p. 285).¶
([16d]) Commission Regulation (EU) 2019/2024 of 1 October 2019 laying down ecodesign requirements for refrigerating appliances with a direct sales function pursuant to Directive 2009/125/EC of the European Parliament and of the Council (OJ L 315, 5.12.2019, p. 313).¶
([16e])

Annex III, point 3(w)	**white** light sources which (1) are designed and marketed specifically for scene-lighting use in film-studios, TV-studios and locations, and photographic-studios and locations, or for stage-lighting use in theatres, during concerts or other entertainment events; and which: (2) provide two or more of the following specifications: (a) LED with high CRI > 90; (b) GES/E40, K39d socket with changeable Colour Temperature down to 1 800 K (undimmed), used with low voltage power supply; (c) LED rated at 180W and greater and arranged to direct output to an area smaller than the light emitting surface; (d) DWE lamp type which is a tungsten lamp defined by its wattage (650 W) voltage (120 V) and terminal type (pressure screw terminal);	light sources that (1) are designed and marketed specifically for scene-lighting use in film-studios, TV-studios and locations, and photographic-studios and locations, or for stage-lighting use in theatres, during concerts or other entertainment events; and that (2) meet **at least one** of the following specifications: (a) LED **with power ≥ 180 W** and CRI > 90; (b) GES/E40, K39d socket with changeable Colour Temperature down to 1 800 K (undimmed), used with low voltage power supply; (c) LED **with power ≥ 180 W** and arranged to direct output to an area smaller than the light emitting surface; (d) **Incandescent light source** that is DWE type and has 650 W power, 120 V voltage and pressure screw terminal;	To clarify an exemption for certain light sources used in theatre and entertainment applications. The clarification was requested by the industry.

	(e) white bi-colour LED sources; (f) fluorescent tubes: Min BI Pin T5 and Bi Pin T12 with CRI ≥ 85 and CCT 2 900, 3 000, 3 200, 5 600 or 6 500 K.	(e) **LED with power ≥ 180 W** that allows the user to set different correlated colour temperatures for the emitted light; (f) LFL T5 with G5 cap and LFL T12 with G13 cap, with CRI ≥ 85 and CCT 2 900, 3 000, 3 200, 5 600 or 6 500 K.	
Annex III, new point 3(x)	N/A	incandescent DLS fulfilling all of the following conditions: E27 cap, clear envelope, power ≥ 100 W and ≤ 400 W, CCT ≤ 2 500 K, specifically designed and marketed for infrared heating.	To introduce an exemption for clear lamps used primarily for infrared heating. The industry considers that not having such an exemption will seriously impact several sectors (e.g. restaurants, poultry farming) that use incandescent lamps also as heat sources. Valid alternatives for dual purpose lamps (lighting + heating) are not available.
Annex IV, Table 6	**Flicker [P_{st} LM] and stroboscopic effect [SVM]** | 10 | The determined value shall not exceed the declared value by more than 10 %.	**Flicker [P_{st} LM] and stroboscopic effect [SVM]** | 10 | The determined value shall not exceed the declared value by more than 0,1.	To compensate for some low tolerances calculated in relation to small numbers (less than one unit).

3.4. Commission Regulation (EU) 2019/2021 of 1 October 2019 laying down ecodesign requirements for electronic displays pursuant to Directive 2009/125/EC of the European Parliament and of the Council, amending Commission Regulation (EC) No 1275/2008 and repealing Commission Regulation (EC) No 642/2009

Provision	Current text	Amended text	Rationale
Article 1.2 (g)	(g) displays that are components or subassemblies of products ~~covered by implementing measures adopted under Directive 2009/125/EU[2].~~	(g) (i) Electronic displays that are components or subassemblies of products covered by implementing measures adopted under Directive 2009/125/EU; (g) (ii) electronic displays that are components or subassemblies **or spare parts** of products **and which are not placed on the market and/or put into service ~~as individual parts of~~ for stand-alone use by end-users or the environmental performance of which cannot be assessed independently**;	Scope (exemption expanded) A number of displays are components or subassemblies of a number of very different products with specificities of the product and that are integrated in such a way that it is exceedingly difficult if not impossible to separately assess requirements See APPLiA's comment in the EL.
Article 1.2		(h) electronic displays for industrial applications in hostile environments	Scope (clarification). Reference to the products group updated as proposed by Italy.
Article 2		(21) 'displays for industrial applications in hostile environments' means an electronic display designed and intended for hostile environments for measuring, testing and process monitoring and control. It design	Definition of the item in previous row

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[2] Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products (OJ L 285, 31.10.2009, p.10).

		must provide at least minimum level of ingress protection for dust tightness and water projected by a nozzle against enclosure from any direction, and, in addition include at least **three** of the following properties: suitability for regular use in ambient temperatures above 40°C, EMC immunity suitable for industrial environments, conformal coating of electronic components, assembly potting, advanced dimming for sunlight readability, impermeable enclosed circuit boards, integrated impact resistant screen.	(if industrial displays are to be excluded from scope, a detailed definition is necessary to avoid possible loopholes). Previous definition included a reference to an EN standard, not mentioned in an amended recital. EN60529 IP65 includes: 6=No ingress of dust; complete protection against contact (dust-tight). , 5= Water projected by a nozzle (6.3 mm (0.25 in)) against enclosure from any direction with no effect
Recitals	(10) Electronic displays for professional use such as video-editing, computer-aided design, graphics or for the broadcast sector, possess enhanced performance and very specific features that, although usually involving higher energy use, should be not subject to on-mode energy efficiency requirements set for more generic products.	(10) Electronic displays for professional use such as video-editing, computer-aided design, graphics or for the broadcast sector, possess enhanced performance and very specific features that, although usually involving higher energy use, should be not subject to on-mode energy efficiency requirements set for more generic products. **Electronic displays for industrial applications in hostile environments have specific and high requirements, such as those for ingress protection at level 65 of EN 60259 and can hardly comply with eco-design requirements set for products design for use in less hostile conditions.**	Recital necessary for mentioning EN standard and the specific ingress protection level required (IP65) in the definition. Paragraph appended not to renumber recitals or not to append it out of place.
Annex I, Definitions	'(5) '*microLED display'* means an electronic display where individual pixels are lit using microscopic ~~GaN~~ LED technology;'	'(5) *'microLED display'* means an electronic display where individual pixels are lit using microscopic LED technology;'	technology agnosticism Technologies other than GaN exist or may exist in future.

Commented [A39]: Reference to the standard added in recital 10 to explain these requirements set as IP65. To be clarified also in Guidelines.

Deleted: 21) *'industrial display'* means an electronic display designed and used in hostile environments for measuring, testing and process monitoring and control. Its design must include at least **three** of the following properties: suitability for regular use in ambient temperatures above 40°C, minimum level of ingress protection of IP65 according to EN60529, EMI shield enclosure against external interference, conformal coating material, assembly potting, advanced dimming for sunlight readability, impermeable enclosed circuit boards, integrated laminated shatterproof glass, gaskets sealing the display;

			(Definition proposed by a MS that asked the amendment after the vote, on the day after)
	==	'(38) 'HD resolution' means 1980 x 1080 pixels or 2 073 600 pixels;	New definition to have HD (see also further in Annex II). In current text HD resolution is indicated at 2 138 400 (
	==	(39) 'UHD-4k resolution' means 3840 x 2160 pixels or 8 294 400 pixels.'	New definition to have UHD (see also further in Annex II). In current text UHD resolution is indicated correctly, but for analogy to the previous and conciseness in Annex II
Annex II, header of Table 1,	EEI_{max} for electronic displays with resolution up to ~~2 138 400 pixels~~ (HD)	EEI_{max} for electronic displays with resolution up to HD	**The result of 1980x1080 is not correct (see new calculation result in definition 38)**
	EEI_{max} for electronic displays with resolution above ~~2 138 400 pixels~~ (HD) and up to ~~8 294 400 pixels~~ (UHD-4k)	EEI_{max} for electronic displays with resolution above HD and up to UHD-4k	idem
	EEI_{max} for electronic displays with resolution above ~~8 294 400 pixels~~ (UHD-4k) and for MicroLED displays	EEI_{max} for electronic displays with resolution above UHD-4k and for MicroLED displays	For homogeneity with previous change
Annex II, point D.5.(a)	(a) Availability of spare parts: (a) manufacturers, importers or authorised representatives of electronic displays shall make available to professional repairers at	(a) Availability of spare parts: (a) manufacturers, importers or authorised representatives of electronic displays shall make available to professional repairers at least the	Capacitors are a standard component, largely available by a number of manufacturers of electronic components. No repairer would look for the original

	least the following spare parts: internal power supply, connectors to connect external equipment (cable, antenna, USB, DVD and Blue-Ray), ~~capacitors~~, batteries and accumulators, DVD/Blue-Ray module if applicable and HD/SSD module if applicable for a minimum period of seven years after placing the last unit of the model on the market;		following spare parts: internal power supply, connectors to connect external equipment (cable, antenna, USB, DVD and Blue-Ray), batteries and accumulators, DVD/Blue-Ray module if applicable and HD/SSD module if applicable for a minimum period of seven years after placing the last unit of the model on the market;		spare part, also in the light of a likely higher cost and longer delivery time. However there is no consensus, as removing the requirement implies no need of removing them with commonly available tools.
Annex IV Table 3, last row	~~Weight of plastic components as qualified in Annex II, point D.2~~	~~The determined value* shall not be different from the declared value by more than 5 grams~~	Maximum concentration values of halogenated flame retardants in the enclosure and stand	The determined value shall be not exceed 0,1 % by weight in homogeneous materials of any halogenated flame retardant.	Tolerance needed in case plastics contain recycled polymers. Threshold coherent with RoHS, POP and REACH legislation. This WEEE will be recyclable, at end of life. E.g. in RoHS, Annex II: [M]aximum concentration values tolerated by weight in homogeneous materials: Polybrominated biphenyls (PBB) (0,1 %) Polybrominated diphenyl ethers (PBDE) (0,1 %)

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3.5. Commission Regulation (EU) 2019/2022 of 1 October 2019 laying down ecodesign requirements for household dishwashers pursuant to Directive 2009/125/EC of the European Parliament and of the Council amending Commission Regulation (EC) No 1275/2008 and repealing Commission Regulation (EU) No 1016/2010

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Provision	Current text	Amended text	Rationale
Recital 12	The relevant product parameters should be measured using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	The relevant product parameters should be measured **or calculated** using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	Some product parameters are not measured but calculated. This text is standard.
Annex IV, point 7	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) or (6).	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 **the second paragraph of this Annex or** points (3) or (6).	This point should be modified to include the non-compliance for the circumvention (in paragraph 2 of this Annex); if not, this specific non-compliance will not be subject to a mandatory reporting to other MS and COM.
Annex III, point 2	2. CLEANING PERFORMANCE INDEX For the calculation of the cleaning performance index (IC) of a household dishwasher model, the cleaning performance of the eco programme is	2. CLEANING PERFORMANCE INDEX For the calculation of the cleaning performance index (IC) of a household dishwasher model, the cleaning performance of the eco programme is	This modification is necessary to be consistent with other products regulation amendments (e.g. Washing Efficiency Index for WM-WD).

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	compared to the cleaning performance of a reference dishwasher. The IC is calculated as follows and rounded to two decimal places: IC = exp (ln IC) and ln IC=(1/n)×Σi=1nln(CT,i/CR,i) where: CT,i is the cleaning performance of the eco programme of the household dishwasher under test for one test run (i), rounded to two decimal places; CR,i is the cleaning performance of the reference dishwasher for one test run (i), rounded to two decimal places; n is the number of test runs.	compared to the cleaning performance of a reference dishwasher. The IC is calculated as follows and rounded to ~~two~~ **three** decimal places: IC = exp (ln IC) and ln IC=(1/n)×Σi=1nln(CT,i/CR,i) where: CT,i is the cleaning performance of the eco programme of the household dishwasher under test for one test run (i), rounded to ~~two~~ **three** decimal places; CR,i is the cleaning performance of the reference dishwasher for one test run (i), rounded to ~~two~~ **three** decimal places; n is the number of test runs.	A precision of three decimals is necessary for the verification of compliance with the ecodesign requirement.
Annex III, point 3	3. DRYING PERFORMANCE INDEX For the calculation of the drying performance index (ID) of a household dishwasher model, the drying performance of the eco programme is compared to the drying performance of the reference dishwasher. The ID is calculated as follows and rounded to two decimal places: ID = exp (ln ID) and ln ID=(1/n)×Σi=1nln(ID,i) where:	3. DRYING PERFORMANCE INDEX For the calculation of the drying performance index (ID) of a household dishwasher model, the drying performance of the eco programme is compared to the drying performance of the reference dishwasher. The ID is calculated as follows and rounded to ~~two~~ **three** decimal places: ID = exp (ln ID) and ln ID=(1/n)×Σi=1nln(ID,i) where:	This modification is necessary to be consistent with other products regulation amendments (e.g. Washing Efficiency Index for WM-WD). A precision of three decimals is necessary for the verification of compliance with the ecodesign requirement.

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	ID,i is the drying performance index of the eco programme of the household dishwasher under test for one test run (i); n is the number of combined cleaning and drying test runs. The ID,i is calculated as follows and rounded to two-decimal places: ln ID,i = ln (DT,i/DR,t) where: DT,i is the average drying performance score of the eco programme of the household dishwasher under test for one test run (i), rounded to two decimal places; DR,t is the target drying score of the reference dishwasher, rounded to two decimal places.	ID,i is the drying performance index of the eco programme of the household dishwasher under test for one test run (i); n is the number of combined cleaning and drying test runs. The ID,i is calculated as follows and rounded to ~~two~~ **three** decimal places: ln ID,i = ln (DT,i/DR,t) where: DT,i is the average drying performance score of the eco programme of the household dishwasher under test for one test run (i), rounded to ~~two~~ **three** decimal places; DR,t is the target drying score of the reference dishwasher, rounded to ~~two~~ **three** decimal places.	

3.6. Commission Regulation (EU) 2019/2023 of 1 October 2019 laying down ecodesign requirements for household washing machines and household washer-dryers pursuant to Directive 2009/125/EC of the European Parliament and of the Council, amending Commission Regulation (EC) No 1275/2008 and repealing Commission Regulation (EU) No 1015/2010

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Provision	Current text	Amended text	Rationale
Recital 13	The relevant product parameters should be measured using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	The relevant product parameters should be measured **or calculated** using reliable, accurate and reproducible methods. Those methods should take into account recognised state-of-the-art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Regulation (EU) No 1025/2012 of the European Parliament and of the Council.	Some product parameters are not measured but calculated. This text is standard.
Annex II, point 8	8. RESOURCE EFFICIENCY REQUIREMENTS From 1 March 2021, household washing machines and household washer-dryers shall meet the following requirements: (1) availability of spare parts: (a) manufacturers, importers or authorised representatives of household washing machines and household washer-dryers shall make available to professional repairers at least the	8. RESOURCE EFFICIENCY REQUIREMENTS From 1 March 2021, household washing machines and household washer-dryers shall meet the following requirements: (1) availability of spare parts: (a) manufacturers, importers or authorised representatives of household washing machines and household washer-dryers shall make available to professional repairers at least the	Today, the vast majority of door locking mechanisms are electronically controlled. Whenever a repair with energized parts is necessary, it should not be carried out by laymen since there is a serious hazard of electrical shocks if done incorrectly. Several member states require a check after repairs for insulation resistance and earth continuity (e.g. EN/VDE) to ensure safety, and end-users neither have the knowledge nor the equipment to execute such tests. Thus, the spare part "door locking assembly" shall be moved from letter (b) to letter

	following spare parts, for a minimum period of 10 years after placing the last unit of the model on the market: — motor and motor brushes; — transmission between motor and drum; — pumps; — shock absorbers and springs; — washing drum, drum spider and related ball bearings (separately or bundled); — heaters and heating elements, including heat pumps (separately or bundled); — piping and related equipment including all hoses, valves, filters and aquastops (separately or bundled); — printed circuit boards; — electronic displays; — pressure switches; — thermostats and sensors; — software and firmware including reset software; (b) manufacturers, importers or authorised representatives of household washing machines and household washer-dryers shall make available to professional repairers and end-users at least the following spare parts: door, door hinge and seals, other seals, door locking assembly and plastic peripherals such as detergent dispensers, for a minimum period of 10 years after placing the last unit of the model on the market;	following spare parts, for a minimum period of 10 years after placing the last unit of the model on the market: — motor and motor brushes; — transmission between motor and drum; — pumps; — shock absorbers and springs; — washing drum, drum spider and related ball bearings (separately or bundled); — heaters and heating elements, including heat pumps (separately or bundled); — piping and related equipment including all hoses, valves, filters and aquastops (separately or bundled); — printed circuit boards; — electronic displays; — pressure switches; — thermostats and sensors; — **door locking assembly** — software and firmware including reset software; (b) manufacturers, importers or authorised representatives of household washing machines and household washer-dryers shall make available to professional repairers and end-users at least the following spare parts: door, door hinge and seals, other seals~~, door locking assembly~~ and plastic peripherals such as detergent dispensers, for a minimum period of 10 years after placing the last unit of the model on the market. Should any of these parts be	(a) in order to be only available for professional repairers. It is generally wise to add to letter (b) that energized parts should never be repaired by end users themselves as it may put their lives in danger. That is why the appliances require a safety check after the repair before they can be used again.

		energized, they should be considered as part of the list in letter (a) and removed from the list in this point.	
Annex III, point 2	2. WASHING EFFICIENCY INDEX The washing efficiency index of household washing machines and of the washing cycle of household washer-dryers (I_W) and the washing efficiency index of the complete cycle of household washer-dryers (J_W) shall be calculated 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 take into account the generally recognised state-of-the-art, and rounded to two decimal places.	2. WASHING EFFICIENCY INDEX The washing efficiency index of household washing machines and of the washing cycle of household washer-dryers (I_W) and the washing efficiency index of the complete cycle of household washer-dryers (J_W) shall be calculated 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 take into account the generally recognised state-of-the-art, and rounded to ~~two~~ **three** decimal places.	This modification is necessary: A precision of three decimals is necessary for the verification of compliance with the ecodesign requirement (for example Iw > 1,03)
Annex IV, point 7	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) or (6).	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 **the second paragraph of this Annex or** points (3) or (6).	This point should be modified to include the non-compliance for the circumvention (in paragraph 2 of this Annex); if not, this specific non-compliance will not be subject to a mandatory reporting to other MS and COM.

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3.7. Commission Regulation (EU) 2019/2024 of 1 October 2019 laying down ecodesign requirements for refrigerating appliances with a direct sales function pursuant to Directive 2009/125/EC of the European Parliament and of the Council

N/A