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ANNEXES 1 to 6

ANNEXES

to the

COMMISSION DELEGATED REGULATION

amending Delegated Regulations (EU) 2019/2013, (EU) 2019/2014, (EU) 2019/2015, (EU) 2019/2016, (EU) 2019/2017 and (EU) No 2019/2018 with regard to energy labelling requirements for electronic displays, light sources, washing machines and washer-dryers, dishwashers, refrigerating appliances and refrigerating appliances with a direct sales function

ANNEX I

Annexes I, III, IV V, VI and IX to Delegated Regulation (EU) 2019/2013 are amended as follows:

(1) in Annex I, the following point (29) is added:

'(29) '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.';

(2) in Annex III, the following paragraph is added at the end of Point 10 of Point (f) of Part 2:

'If the electronic 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, shall be vertically centred in the area below the indication of the energy consumption.';

(3) Annex IV is amended as follows:

(a) a second paragraph is inserted as follows:

'In the absence of existing relevant standards and until the publication of the references of the relevant harmonised standards in the Official Journal, the transitional testing methods set out in Annex IIIa to Commission Delegated Regulation (EU) 2019/2021 laying down ecodesign requirements for electronic displays, or other reliable, accurate and reproducible methods, which take intoaccount the generally recognised state-of-the-art, shall be used.';

(b) at the end of the Annex, the following text is added:

'Measurements of Standard Dynamic Range, screen luminance for Auto Brightness Control, Peak White luminance ratio shall be made as detailed in Table 1. The functioning of the forced menu shall be as detailed in Table 1, last row.

Table 1

References and qualifying notes

	Notes
P*measured* Standard dynamic range (SDR) on-mode, "normal"	***Power measurement notes*** *(See Section 1.3.7 of Annex IIIa for informative notes regarding the testing of Displays with a standardised DC input or a non-removable battery providing the primary power. For the purposes of these Transitional Measurement Methods a standardised DC input is solely one compatible with the various forms of USB power delivery.* ***Video Signals Notes*** The 10-minute Dynamic Broadcast video sequence described in existing relevant standards shall be replaced with an updated 10-minute Dynamic Broadcast video sequence. This is available for download at: https://circabc.europa.eu/ui/group/1582d77c-d930-4c0d-b163-4f67e1d42f5b/library/23ab249b-6ebc-4f45-9b0e-df07bc61a596?p=1&n=10&sort=modified_DESC [link to be updated]. Two files are available, in SD and HD. They are respectively titled "SD Dynamic Video Power.mp4", and "HD Dynamic Video Power.mp4". SD resolution is made available for the limited types of display that cannot accept or display higher resolution standards. It is recommended that the HD resolution file is used for all other display resolutions since this closely matches the average picture level (APL) of the current IEC HD dynamic broadcast test sequence described in existing relevant standards . Upscaling from HD to higher native resolution must be performed by the UUT and not an external device. The data signal from the downloaded file storage system to the UUT digital signal interface must be confirmed to provide peak white and full black video levels. If the file playback system has special picture

	Notes
	optimisation features (e.g. deep blacks or enhanced colour processing) these should be disabled. For repeatability of measurement purposes, the file storage and playback system should be detailed as well as the type of digital interface with the UUT (e.g. HDMI, DVI etc.) The power measurement P *measured* is an average value from the full 10-minute length of the test pattern, taken with ABC disabled.
P*measured* High dynamic range (HDR) on-mode "normal" *(auto mode switching to HDR)*	No existing relevant standards can be used. Following the **P***measured* (SDR) test sequence measurement two HDR test sequences shall be played. These 5-minute sequences are rendered in HD resolution only, in the common HDR standards of HLG and HDR10. Upscaling from HD to a higher native display resolution must be performed by the UUT and not an external device. These files are available for download at: https://circabc.europa.eu/ui/group/1582d77c-d930-4c0d-b163-4f67e1d42f5b/library/38df374d-f367-4b72-93d6-3f48143ad661?p=1&n=10&sort=modified_DESC [link to be updated] and have identical programme content. The files are respectively titled "HDR-HLG Power.mp4" and "HDR_HDR10 Power.mp4" It is essential that the UUT switch to the HDR display mode is confirmed in the picture settings menu before power data is logged. The integrated power measurement for each sequence (**P***av*) should be summed and halved for the calculation of the label HDR energy efficiency class and label HDR power declaration. An ABC allowance does not apply in HDR display mode. *(Regulation (EU) 2019/2013 Annex III. 1. Label VII & VIII)*: Viz**:** *Label VII*, **P***measured* for HDR EEI *label* = 0.5 * **(P***av HLG* + **P***av HDR10*) *Label VIII* declaration, kWh/1000h **=** 0.5 *** (P***av HLG* + **P***av HDR10*)
Screen Luminance Measurement for automatic brightness control (ABC) control characteristics evaluation and any other peak white luminance measurement requirement.	No existing relevant standards can be used. A new variant of the "box and outline" test pattern providing a dynamic format with colour shall be used for all peak white display luminance measurements and not the 3-bar black and white pattern. A set of these variant test patterns, which combine the box and outline format and VESA L10 to L80 white measurement box format shall be used as described in *Section 1.3.4*. of Annex IIIa and may be downloaded at: https://circabc.europa.eu/ui/group/1582d77c-d930-4c0d-b163-4f67e1d42f5b/library/4f4b47a4-c078-49c4-a859-84421fc3cf5e?p=1 [link to be updated] They are contained in a sub folders labelled SD, HD and UHD. Each sub folder has eight peak white test patterns from L10 to L80. A resolution may be chosen according to the native resolution and signal compatibility of the UUT. The selection of pattern within the appropriate resolution should be based upon a) the minimum required white box dimensions for correct operation of the contact luminance measuring instrument and b) such that no power limiting effect is exhibited by the UUT (large areas of white may result in a reduction of peak white levels). Any upscaling must be performed by the UUT and not an external device. The data signal from the downloaded file storage system to the UUT digital signal interface must be confirmed to provide peak white and full black video levels and have no other video enhancement processing (e.g. deep blacks / colour enhancement) Both the storage system and signal interface type should be noted. For displays tested using the USB-C interface, the host machine shall not have a battery and must operate on its own ac power source (e.g. desktop computer, Blu-ray player, etc.).
Measurements related to ABC for "Allowances and adjustments for the purposes of the EEI calculation and functional requirements"	The methodology for ABC ambient light source set-up and luminance control as specified in existing standards shall not be used for the purposes of ABC related measurements for this Regulation. A preferred methodology is detailed in *Section 1.3.5. of Annex IIIa.*
Peak white luminance ratio	No existing relevant standards can be used. The "box and outline" test pattern selected for the ABC peak white luminance measurements *(Section 2.3.4)* shall be used to measure the peak white luminance of the "normal configuration" with ABC on. If this is less than 150 cd/m² for monitors or 220 cd/m² for other display products, then a further measurement must be made of the peak white luminance of the brightest pre-set configuration in the user menu (not the retail setting). ABC need not be on for the luminance ratio measurements but the status of the ABC (on or off) must apply to both measurements. Where ABC is on, the illuminance should be 100lux for both measurements. Care should be taken to ensure that the test pattern selected for peak white luminance measurement in the "normal configuration" does not cause luminance instability *(see section 2.3.4)* in the brightest pre-set configuration. A smaller peak white box pattern should be selected for both measurements if instability occurs.
Forced Menu and set-up menus	A UUT set up flow chart evaluating conformity with the set-up requirements of the Regulation is shown in *Section 1.1* of Annex IIIa

’;

(4) in Annex V, the following paragraph is added after 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’;

(5) Annex VI is amended as follows:

(a) points (1) to (5) are replaced by the following:

‘(1) a general description of the model allowing it to be unequivocally and easily identified, including a list of all equivalent models, including model identifiers;

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

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

(4) the values for the technical parameters set out in Table 5; these values are considered as the declared values for the purpose of the verification procedure in Annex IX;

(5) the details and the results of calculations performed in accordance with Annex IV, if not covered sufficiently in Table 5;

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

(7) a list of all equivalent models, including model identifiers;

(8) the declared values of the parameters listed in Table 4 of Annex V if not covered by Table 5.

These elements shall also constitute the mandatory specific parts of the technical documentation that the supplier shall enter into the database, pursuant to point 5 of Article 12 of Regulation (EU) 2017/1369.’;

(b) Table 5 is replaced by the following:

‘*Table 5*

Technical parameters of the model and declared values

		Parameter value and precision	**Unit**	**Declared value**
	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	XXX,X	W	

	Dynamic Range (SDR)			
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	XX	inches	
15	Visible screen area	XXX,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)**:	XX	Years	
22	Minimum guaranteed availability of spare parts **(from the date of end of the placement on the market, as set out in Annex II D, point 1 of Commission Regulation (EU) 2019/2021)**:	XX	Years	

23	Minimum guaranteed product support **(from the date of end of the placement on the market)**:	XX	Years	
	For On-mode			
24	Peak white luminance of the brightest on mode configuration	XXXX	cd/m²	
25	Peak white luminance of the normal configuration	XXXX	cd/m²	
26	Peak white luminance ratio (calculated) **(Value row 25 above divided by value row 24 above multiplied by 100)** *Alternatively* **(Value of 'Peak white luminance of the normal configuration' divided by value of 'Peak white luminance of the brightest on mode configuration' multiplied by 100)**	XX,X	%	
	For APD			
27	**Length of time in** on mode before the electronic display automatically **switches to** standby, off mode, or another condition which does not exceed the applicable power demand requirements for off mode or standby mode.	XX:XX	mm:ss	
28	For televisions: the **length** of time, following the last user interaction, before the television automatically **switches to** standby, off-mode, or another condition which does not exceed the applicable power consumption requirements for off-mode or standby-mode;	XX:XX	mm:ss	
29	For televisions equipped with room presence **sensor**: the **length** of time, when no presence is detected, before the television automatically **switches to** standby, off-mode, or another condition which does not exceed the applicable power demand requirements **for off mode or standby mode**;	XX:XX	mm:ss	

30	**For** electronic displays **other** than televisions and broadcast displays: the **length** of time, when no input is detected, before the **electronic display** automatically **switches to** standby, off-mode, or another condition which does not exceed the applicable power consumption requirements **for off mode or standby mode**;	XX:XX	mm:ss	
	For ABC If available and activated by default			
31	Percentage of power reduction due to ABC action between the 100 lux and 12 lux ambient light conditions.	XX,X	%	
32	On mode power at 100 lux ambient light at the ABC sensor	XXX,X	W	
33	On mode power at 12 lux ambient light at the ABC sensor	XXX,X	W	
34	Screen luminance at 100 lux ambient light at the ABC sensor*	XXX	cd/m²	
35	Screen luminance at 60 lux ambient light at the ABC sensor*	XXX	cd/m²	
36	Screen luminance at 35 lux ambient at the ABC sensor*	XXX	cd/m²	
37	Screen luminance at 12 lux ambient light at the ABC sensor*	XXX	cd/m²	
	For Power Supply			
38	Power supply (internal or external, only if bundled with the display)	Standard reference (if any)	TEXT	
39	Input voltage	XXX,X	V	
40	Output voltage	XXX,X	V	
41	Input current (max)	XXX,X	A	

42	Output current (min)	XXX.X	A	

* the values of ABC luminance-related parameters are indicative, and the verification is against the applicable ABC-related requirements.';

(c) point (6) is renumbered as point (9)

(d) point (7) is renumbered as point (10)

(e) point (8) is renumbered as point (11)

(6) Annex IX is amended as follows:

(a) the first paragraph is replaced by the following:

'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. The values and classes published on the label or in the product information sheet shall not be more favourable for the supplier than the values declared in the technical documentation.';

(b) point (7) is replaced by the following:

'(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 is taken on the non-compliance of the model according to points 3, 6 or the second paragraph of this Annex.';

(c) Table 6 is replaced by the following:

'*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 % or 0,1 dm^2, whichever is smaller.
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 7 %.

Length of time in on mode before the electronic display automatically switches to standby, off mode, or another condition which does not exceed the applicable power demand requirements for off mode or standby mode	The determined value* shall not exceed the declared value by more than 10 seconds.
For televisions: the length of time, following the last user interaction, before the television automatically switches to standby, off-mode, or another condition which does not exceed the applicable power consumption requirements for off-mode or standby-mode	The determined value* shall not exceed the declared value by more than 10 seconds.
For televisions equipped with room presence sensor: the length of time, when no presence is detected, before the television automatically switches to standby, off-mode, or another condition which does not exceed the applicable power demand requirements for off mode or standby mode	The determined value* shall not exceed the declared value by more than 10 seconds.
For electronic displays other than televisions and broadcast displays: the length of time, when no input is detected, before the electronic display automatically switches to standby, off-mode, or another condition which does not exceed the applicable power consumption requirements for off mode or standby mode	The determined value* shall not exceed the declared value by more than 10 seconds.

(*) 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.

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ANNEX II

Annexes I, IV, V, VI, VIII, IX and X to Delegated Regulation (EU) 2019/2014 are amended as follows:

(1) in Annex I, the following point (33) is added:

'(33) '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.';

(2) Annex IV is amended as follows:

(a) point 1 is replaced by the following:

'1. RATED CAPACITY OF HOUSEHOLD WASHER-DRYERS

The rated capacity of household washer-dryers is the rated capacity of 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 and the rated drying capacity of the drying cycle achieving cupboard dry status.';

(b) points 3 and 4 are replaced by the following:

'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 3 kg and for the washing cycle of household washer-dryers with a rated capacity higher than 3 kg, the I_W indicated on the Product Information Sheet shall be the lowest 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 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 lower 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.

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 capacity higher than 3 kg, the I_R indicated on the Product Information Sheet shall be the highest 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 3 kg, the J_R indicated on the Product Information Sheet shall be the higher 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.';

(c) in point 6, the first paragraph of point 2 is replaced by the following:

(a) 'For household washer-dryers with a rated washing capacity lower than or equal to 3 kg, the weighted water consumption of the wash and dry cycle is the water consumption at rated capacity and rounded to the nearest integer.';

(d) point 7 is replaced by the following:

'7. REMAINING MOISTURE CONTENT

'The weighted remaining moisture content after washing (D) of a household washing machine and of the washing cycle of a household washer-dryer is calculated in percentage as follows and rounded to one decimal place:

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

where:

D_{full} is the remaining moisture content for the eco 40-60 programme at rated washing capacity, in percentage and rounded to two decimal places;

$D_{1/2}$ is the remaining moisture content for the eco 40-60 programme at half of the rated washing capacity in percentage and rounded to two decimal places;

$D_{1/4}$ is the remaining moisture content for the eco 40-60 programme at a quarter of the rated washing capacity in percentage and rounded to two decimal places;

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

(e) point 9 is replaced by the following:

'9. LOW POWER MODES

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

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

– the display or not of information;

– the activation or not of a network connection.

If a household washing machine or a household washer-dryer provides for a wrinkle guard function, this operation shall be interrupted by opening the household washing machine or household washer-dryer door, or any other appropriate intervention 15 minutes before the measurement of energy consumption.';

(f) the following point 11 is added at the end:

'11. SPIN SPEED

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.';

(3) Annex V is amended as follows:

(a) Table 5 is replaced by the following:

'*Table 5*

Content, order and format of the product information sheet

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

Washing efficiency index[b]	x,xxx		Rinsing effectiveness (g/kg)[b]	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[b] (°C)	Rated capacity	x	Weighted remaining moisture content[b] (%)	x
	Half	x		
	Quarter	x		
Spin speed[b] (rpm)	Rated capacity	x	Spin-drying efficiency class[b]	[A/B/C/D/E/F/G][d]
	Half	x		
	Quarter	x		
Programme duration[b] (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[b] (dB(A) re 1 pW)	x		Airborne acoustical noise emission class[b] (spinning phase)	[A/B/C/D][d]
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 [a,c]:				
This product has been designed to release silver ions during the washing cycle			**[YES/NO]**	

Additional information[a]:
Weblink to the supplier's website, where the information in point 9 of Annex II to Commission Regulation (EU) 2019/2023 is found[a,c]:

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

[b] for the eco 40-60 programme.

[c] changes to these items shall not be considered relevant for the purposes of paragraph 4 of 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.';

(b) Table 6 is replaced by the following:

'*Table 6*

Content, order and format of the product information sheet

Supplier's name or trade mark[a]:					
Supplier's address [a,d]:					
Model identifier[a]:					
General product parameters:					
Parameter	Value		Parameter	Value	
Rated capacity (kg)	Rated capacity[c]	x,x	Dimensions in cm[a]	Height	x
	Rated washing capacity[b]	x,x		Width	x
				Depth	x
Energy Efficiency Index	EEI_W [b]	x,x	Energy efficiency class	EEI_W [b]	[A/B/C/D/E/F/G][e]
	EEI_{WD} [c]	x,x		EEI_{WD} [c]	[A/B/C/D/E/F/G][e]
Washing efficiency index	I_W [b]	**x,xxx**	Rinsing effectiveness (g/ kg dry textile)	I_R [b]	x,x
	J_W [c]	**x,xxx**		J_R [c]	x,x
Energy consumption in kWh per cycle, for the washing cycle of the household washer-dryer, using the eco 40-60	x,xxx		Energy consumption in kWh per cycle, for the wash and dry cycle of the household washer-dryer at a	x,xxx	

programme at a combination of full and partial loads. Actual energy consumption will depend on how the appliance is used			combination of full and half loads. Actual energy consumption will depend on how the appliance is used		
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	
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)[b]	Rated washing capacity	x	Weighted remaining moisture content (%)[b]	x	
	Half	x			
	Quarter	x			
Eco 40-60 programme duration (h:min)	Rated washing capacity	x:xx	Spin-drying efficiency class[b]	[A/B/C/D/E/F/G][e]	
	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
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][e]	
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[a,d]:				
This product has been designed to release silver ions during the washing cycle		**[YES/NO]**		
Additional information[a]:				
Weblink to the supplier's website, where the information in point 9 of Annex II to Regulation (EU) 2019/2023 is found[a,c]:				

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

[b] for the eco 40-60 programme.

[c] for the wash and dry cycle.

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

[e] if the product database automatically generates the definitive content of this cell the supplier shall not enter these data.';

(4) Annex VI is amended as follows:

(a) point 1 is replaced by the following:

'1. For household washing machines, 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 a list of all equivalent models, including model identifiers;

(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 7; 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 7;

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

(g) a list of all equivalent models, including model identifiers;

(h) the declared values of the parameters listed in Table 5 of Annex V if not covered by Table 7.

These elements shall also constitute the mandatory specific parts of the technical documentation that the supplier shall enter into the database, pursuant to point 5 of Article 12 of Regulation (EU) 2017/1369.

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)	X,XXX	kWh/cycle
Standard energy consumption of the eco 40-60 programme (SCE_W)	X,XXX	kWh/cycle

Energy Efficiency Index (EEI_W)	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)	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	-
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
Weighted remaining moisture content (D)	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
Power consumption in 'delay start' (P_{ds}) (if applicable)	X,XX	W

';

(b) point 2 is replaced by the following:

'2. For household washer-dryers, 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 a list of all equivalent models, including model identifiers;

(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 8; 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 8;

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

(g) a list of all equivalent models, including model identifiers;

(h) the declared values of the parameters listed in Table 6 of Annex V if not covered by Table 8.

These elements shall also constitute the mandatory specific parts of the technical documentation that the supplier shall enter into the database, pursuant to point 5 of Article 12.5 of Regulation (EU) 2017/1369.

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)	X,XXX	kWh/cycle
Standard energy consumption of the eco 40-60 programme (SCE_W)	X,XXX	kWh/cycle
Energy Efficiency Index of the washing cycle (EEI_W)	X,X	-
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})	X,XXX	kWh/cycle
Standard energy consumption of the wash and dry cycle (SCE_{WD})	X,XXX	kWh/cycle
Energy Efficiency Index of the wash and dry cycle (EEI_{WD})	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)	X	L/cycle
Water consumption of the wash and dry cycle at rated capacity ($W_{WD,full}$)	X,X	L/cycle
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})	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
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	X:XX	h:min

half rated washing capacity (t_w)		
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
Weighted remaining moisture content after washing (D)	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) (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
Power consumption in 'delay start' (P_{ds}) (if applicable)	X,XX	W

';

(5) in Annex VIII, point 1 is replaced by the following:

'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. 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 a nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.';

(6) Annex IX is amended as follows:

(a) the first paragraph is replaced by the following:

'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. The values and classes published on the label or in the product information sheet shall not be more favourable for the supplier than the values declared in the technical documentation.';

(b) point 7 is replaced by the following:

'(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 is taken on the non-compliance of the model according to points 3, 6 or the second paragraph of this Annex.';

(c) Table 9 is replaced by the following:

'*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 and J_W)	The determined value* shall not be less than the declared value of I_W, respectively J_w, by more than 8 %.
Rinsing effectiveness (I_R and J_R)	The determined value* shall not exceed the declared value of I_R, respectively J_R, by more than 1,0 g/kg.
Programme or cycle duration	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) during the washing cycle	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.
Weighted remaining moisture content after washing (D)	The determined value* shall not exceed the declared value of D by more than 10 %.
Final moisture content after drying	The determined value* shall not exceed 3,0 %.
Spin speed (S)	The determined value* shall not be less than the 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	The determined value* of power consumption

consumption in delay start (P_{ds})	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.';

(7) in Annex X, point (f) is replaced by the following:

'(f) the remaining moisture content after washing is calculated as the weighted average, according to each drum's rated capacity;'

ANNEX III

Annexes I, III, IV, V, VI and IX to Delegated Regulation (EU) 2019/2015 are amended as follows:

(1) in Annex I, point (42) is replaced by the following:

'(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.';

(2) in Annex III, the third paragraph of point 1 is replaced by the following:

'The label shall be:

– for the standard-sized label, at least 36 mm wide and 72 mm high;

– for the small-sized label (width less than 36 mm), at least 20 mm wide and 54 mm high.';

(3) Annex IV is amended as follows:

(a) in point 1, point (a) is replaced by the following:

'(a) in radiological and nuclear medicine installations that are subject to radiation safety standards as set out in Council Directive 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).';

(b) in point 3, the following point (l) is added:

'(l) Incandescent light sources with blade contact-, metal lug-, cable-, litz wire-, metric thread-, pin base- 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).'

(4) Annex V is amended as follows:

(a) Table 3 is replaced by the following:

'Table 3

Product information sheet

Supplier's name or trade mark:			
Supplier's address[a]:			
Model identifier:			
Type of light source:			
Lighting technology used:	[HL/LFL T5 HE/ LFL T5	Non-directional or directional:	[NDLS/DLS]

	HO/CFLni/ other FL/ HPS/ MH/ other HID/ LED/ OLED/mixed/ other]		
Light source cap-type (or other electric interface)	[free text]		
Mains or non-mains:	[MLS/NMLS]	Connected light source (CLS):	[yes/no]
Colour-tuneable light source:	[yes/no]	Envelope:	[no/second/non-clear]
High luminance light source:	[yes/no]		
Anti-glare shield:	[yes/no]	Dimmable:	[yes/only with specific dimmers/no]
Product parameters			
Parameter	Value	Parameter	Value
General product parameters:			
Energy consumption in on-mode (kWh/1000 h), **rounded up to the nearest integer**	x	Energy efficiency class	[A/B/C/D/E/F/G][b]
Useful luminous flux (Φuse), indicating if it refers to the flux in a sphere (360˚), in a wide cone (120˚) or in a narrow cone (90˚)	x in [sphere/wide cone/narrow cone]	Correlated colour temperature, rounded to the nearest 100 K, or the range of correlated colour temperatures, rounded to the nearest 100 K, that can be set	**[x/x…x/x or x (or x…)]**
On-mode power (P_{on}), expressed in W	x,x	Standby power (P_{sb}), expressed in W and rounded to the second decimal	x,xx
Networked standby power (P_{net}) for CLS, expressed in	x,xx	Colour rendering index, rounded to the	[x/x…x]

W and rounded to the second decimal			nearest integer, or the range of CRI-values that can be set	
Outer dimensions without separate control gear, lighting control parts and non-lighting control parts, if any (millimetre)	Height	x	Spectral power distribution in the range 250 nm to 800 nm, at full-load	[graphic]
	Width	x		
	Depth	x		
Claim of equivalent power[c]		[yes/-]	If yes, equivalent power (W)	x
			Chromaticity coordinates (x and y)	0,xxx 0,xxx
Parameters for directional light sources:				
Peak luminous intensity (cd)		x	Beam angle in degrees, or the range of beam angles that can be set	[x/x…x]
Parameters for LED and OLED light sources:				
R9 colour rendering index value		x	Survival factor	x,xx
the lumen maintenance factor		x,xx		
Parameters for LED and OLED mains light sources:				
displacement factor (cos φ1)		x,xx	Colour consistency in McAdam ellipses	x
Claims that an LED light source replaces a fluorescent light source without integrated ballast of a particular wattage.		[yes/-][d]	If yes then replacement claim (W)	x
Flicker metric (Pst LM)		x,x	Stroboscopic effect metric (SVM)	x,x

[a] changes to these items shall not be considered relevant for the purposes of point 4 of Article 4 of Regulation (EU) 2017/1369.

[b] if the product database automatically generates the definitive content of this cell the supplier shall not enter these data.

[c] '-' : not applicable;

'yes': An equivalence claim involving the power of a replaced light source type may be given only:

- for directional light sources, if the light source type is listed in Table 4 and if the luminous flux of the light source in a 90 ° cone ($\Phi_{90°}$) is not lower than the corresponding reference luminous flux in Table 4. The reference luminous flux shall be multiplied by the correction factor in Table 5. For LED light sources, it shall be in addition multiplied by the correction factor in Table 6;
- for non-directional light sources, the claimed equivalent incandescent light source power (rounded to 1 W) shall be that corresponding in Table 7 to the luminous flux of the light source.

The intermediate values of both the luminous flux and the claimed equivalent light source power (rounded to the nearest 1 W) shall be calculated by linear interpolation between the two adjacent values.

[d] '-': not applicable;

'yes': Claim that a LED light source replaces a fluorescent light source without integrated ballast of a particular wattage. This claim may be made only if:

- the luminous intensity in any direction around the tube axis does not deviate by more than 25 % from the average luminous intensity around the tube; and
- the luminous flux of the LED light source is not lower than the luminous flux of the fluorescent light source of the claimed wattage. The luminous flux of the fluorescent light source shall be obtained by multiplying the claimed wattage with the minimum luminous efficacy value corresponding to the fluorescent light source in Table 8; and
- the wattage of the LED light source is not higher than the wattage of the fluorescent light source it is claimed to replace.

The technical documentation file shall provide the data to support such claims.
';

(b) Table 7 is replaced by the following:

'Table 7

Equivalence claims for non-directional light sources

Light source luminous flux Φ (lm)	Claimed equivalent incandescent light source power (W)
136	15
249	25

470	40
806	60
1 055	75
1 521	100
2 452	150
3 452	200

’;

(5) Annex VI is amended as follows:

(a) in point 1, point (e) 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:

(1) useful luminous flux (Φ_{use}) in lm;

(2) colour rendering index (CRI);

(3) on-mode power (P_{on}) in W;

(4) beam angle in degrees for directional light sources (DLS);

(4a) peak luminous intensity in cd for directional light sources (DLS);

(5) correlated colour temperature (CCT) in K;

(6) standby power (P_{sb}) in W, including when it is zero;

(7) networked standby power (P_{net}) in W for connected light sources (CLS);

(7a) R9 colour rendering index value for LED and OLED light sources;

(7b) survival factor for LED and OLED light sources;

(7c) lumen maintenance factor for LED and OLED light sources;

(7d) lifetime L70B50 for LED and OLED light sources;

(8) displacement factor (cos φ1) for LED and OLED mains light sources;

(9) colour consistency in MacAdam ellipse steps for LED and OLED light sources;

(10) luminance-HLLS in cd/mm^2 (only for HLLS)

(11) flicker metric (PstLM) for LED and OLED light sources;

(12) stroboscopic effect metric (SVM) for LED and OLED light sources;

(13) excitation purity, only for CTLS, for the following colours and dominant wavelength within the given range:

Colour	Dominant wave-length range
Blue	440 nm — 490 nm
Green	520 nm — 570 nm
Red	610 nm — 670 nm’;

(b) the following point 2 is added:

‘2. The elements listed under point 1 shall also constitute the mandatory specific parts of the technical documentation that the supplier shall enter into the database, pursuant to point 5 of Article 12 of Regulation (EU) 2017/1369.’:

(6) Annex IX is amended as follows:

(a) the first paragraph is replaced by the following:

‘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. The values and classes published on the label or in the product information sheet shall not be more favourable for the supplier than the values declared in the technical documentation.’;

(b) the following second paragraph is inserted:

‘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.’;

(c) the second paragraph of Point 1 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.’;

(d) Table 9 is replaced by the following:

‘*Table 9*

Verification tolerances

Parameter	Sample size	Verification tolerances
Full-load on-mode power P_{on} [*W*]:		
$P_{on} \leq 2W$	10	The determined value shall not exceed the declared value by more than 0,20 W.
$2W < P_{on} \leq 5W$	10	The determined value shall not exceed the declared value by more than 10 %.
$5W < P_{on} \leq 25W$	10	The determined value shall not exceed the declared value by more than 5 %.
$25W < P_{on} \leq 100W$	10	The determined value shall not exceed the declared value by more than 5 %.

$100W < P_{on}$	10	The determined value shall not exceed the declared value by more than 2.5 %.
Displacement factor [*0-1*]	10	The determined value shall not be less than the declared value minus 0,1 units.
Useful luminous flux Φ_{use} [*lm*]	10	The determined value shall not be less than the declared value minus 10 %.
Standby power P_{sb} and networked standby power P_{net} [*W*]	10	The determined value shall not exceed the declared value by more than 0,10 W.
CRI and R9 [*0-100*]	10	The determined value shall not be less than the declared value by more than 2,0 units.
Flicker [*Pst LM*] and stroboscopic effect [*SVM*]	10	The determined value shall not exceed the declared value by more than 0,1.
Colour consistency [*MacAdam ellips steps*]	10	The determined number of steps shall not exceed the declared number of steps. The centre of the MacAdam ellipse shall be the centre declared by the supplier with a tolerance of 0,005 units.
Beam angle (*degrees*)	10	The determined value shall not deviate from the declared value by more than 25 %.
Total mains efficacy η_{TM} [lm/W]	10	The determined value (quotient) shall not be less than the declared value minus 5 %.
Lumen maintenance factor (for LED and OLED)	10	The determined X_{LMF}% of the sample shall not be less than $X_{LMF,\ MIN}$% according to the text in Annex V of Commission Regulation (EU) 2019/2020 ([1]).
Survival factor (for LED and OLED)	10	At least 9 light sources of the test sample must be operational after completing the endurance test in Annex V of Regulation (EU) 2019/2020.
Excitation purity [%]	10	The determined value shall not be less than the declared value minus 5 %.
Correlated colour temperature [K]	10	The determined value shall not deviate from the declared value by more than 10 %.
Peak luminous intensity [cd]	10	The determined value shall not deviate from the declared value by more than 25 %.

([1]) 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 (see page 209 of this Official Journal).

For light sources with linear geometry which are scalable but of very long length, such as LED strips or strings, verification testing of market surveillance authorities shall consider a length of 50 cm, or, if the light source is not scalable there, the nearest value to 50 cm. The light source supplier shall indicate which control gear is suitable for this length.

When verifying if a product is a light source, market surveillance authorities shall compare the measured values for chromaticity coordinates (x and y), luminous flux, luminous flux density, and colour rendering index directly with the limit values set out in the definition for light source of Article 2 of this Regulation, without applying any tolerances. If any of the 10 units in the sample satisfies the conditions for being a light source, the product model shall be considered to be a light source.

Light sources that allow the end-user to control, manually or automatically, directly or remotely, the luminous intensity, colour, correlated colour temperature, spectrum, and/or beam angle of the emitted light shall be evaluated using the reference

’.

ANNEX IV

Annexes I, IV, V, VI and IX to Delegated Regulation (EU) 2019/2016 are amended as follows:

(1) in Annex I, the following point (42) is added:

'(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.';

(2) in Annex II, Table 1 is replaced by the following:

'*Table 1*

Energy efficiency classes of refrigerating appliances

Energy efficiency class	Energy efficiency index (EEI)
A	EEI ≤ 41
B	41 < EEI ≤ 51
C	51 < EEI ≤ 64
D	64 < EEI ≤ 80
E	80 < EEI ≤ 100
F	100 < EEI ≤ 125
G	EEI > 125

';

(3) in Annex IV, point 1 is amended as follows:

(a) Paragraph (h) and (i) are replaced by the following:

'(h) the freezing capacity of a compartment is calculated as 24 times the light load weight of that compartment, 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/24h and rounded to one decimal place;

(i) for 4-star compartments, the freezing time to bring the temperature of the light load from +25 to - 18 °C at an ambient temperature of 25 °C shall be such that the resulting freezing capacity complies with the requirement in Annex I, point 4;';

(b) The following point (k) is added:

'(k) the light load weight for each 4-star compartment shall be:

– 3,5 kg/100 l of the volume of the 4-star compartment evaluated, rounded up to the nearest 0,5 kg; and,

– 2 kg for a 4-star compartment with a volume for which 3,5 kg/100 l leads to a value lower than 2 kg;

in the case that the refrigerating appliance includes a combination of 3- and 4-star compartments, the sum of the light load weight(s) shall be increased so that the sum of the light load weights for all the 4-star compartments shall be:

– 3,5 kg/100 l of the total volume of all 4- and 3-star compartments, rounded up to the nearest 0,5 kg; and,

– 2 kg for a total volume of all 4- and 3-start compartments for which 3,5 kg/100 l leads to a value lower than 2 kg.';

(c) Table 4 is replaced as follows:

'*Table 4*

The values of the modelling parameters per compartment type

Compartment type	r_c[a]	N_c	M_c	C
Pantry	0,35	75	0,12	between 1,15 and 1,56 for combi appliances with 3-or 4-star compartments[b], 1,15 for other combi appliances, 1,00 for other refrigerating appliances
Wine storage	0,60			
Cellar	0,60			
Fresh food	1,00			
Chill	1,10	138	0,12	
0-star & ice-making	1,20	138	0,15	
1-star	1,50			
2-star	1,80			
3-star	2,10			
Freezer (4-star)	2,10			

[a] $r_c = (T_a - T_c)/20$; with T_a = 24 °C and T_c with values as set out in Table 3.

[b] C for combi appliances with 3- or 4-star compartments is rounded to two decimal places and determined as follows:

where *frzf* is the 3- or 4-star compartment volume V_{fr} as a fraction of V with $frzf = V_{fr}/V$:

– if $frzf \leq 0{,}3$ then $C = 1{,}3 + 0{,}87 \times frzf$;

– else if $0{,}3 < frzf < 0{,}7$ then $C = 1{,}87 - 1{,}0275 \times frzf$;

– else $C = 1{,}15$.

';

(4) in Annex V, Table 6 is replaced by the following:

'*Table 6*

Product information sheet

Supplier's name or trade mark[d]:			
Supplier's address[b,d]:			
Model identifier[d]:			
Type of refrigerating appliance:			
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)	Height	x	Total volume (dm³ or l)	x
	Width	x		
	Depth	x		
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	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 optimised food storage (°C) These settings shall not contradict the storage conditions set out in Annex IV, Table 3	Freezing capacity (kg/24 h)	Defrosting type (auto-defrost=A, manual defrost=M)
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	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]
Energy efficiency class	[A/B/C/D/E/F/G]
Minimum duration of the guarantee offered by the manufacturer[b]:	
Additional information[d]:	
Weblink to the supplier's website, where the information in point 4 of Annex II of Commission Regulation (EU) 2019/2019[1, b] is found:	

[1] 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 (see page 187 of this Official Journal).

[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 point 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.

[d] changes to these items shall not be considered relevant for the purpose of Article 2(6) of Regulation (EU) 2017/1369. ';

(5) in Annex VI, point 1 is replaced by the following:

'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 a list of all equivalent models, including model identifiers;

(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 7; 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 7;

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

(g) a list of all equivalent models, including model identifiers;

(h) the declared values of the parameters listed under Annex V if not covered by Table 7.

These elements shall also constitute the mandatory specific parts of the technical documentation that the supplier shall enter into the database, pursuant to point 5 of Article 12 of Regulation (EU) 2017/1369.';

(6) Annex IX is amended as follows:

(a) the first paragraph is replaced by the following:

'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. The values and classes published on the label or in the product information sheet shall not be more favourable for the supplier than the values declared in the technical documentation.';

[2] Commission Delegated Regulation (EU) 2019/2015 of 11 March 2019 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 (see page 68 of this Official Journal).

(b) point (7) is replaced as follows:

‘(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 is taken on the non-compliance of the model according to points 3, 6 or the second paragraph of this Annex.’;

(c) Table 8 is replaced by the following:

‘Table 8

Verification tolerances for measured parameters

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_{32}	The determined value[a] shall not be more than 10 % higher than the declared value.
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 value by more than 10 %.
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 % higher than the declared value.

’.

ANNEX V

Annexes I, II, IV, V, VI and IX to Delegated Regulation (EU) 2019/2017 are amended as follows:

(1) in Annex I, the following point (24) is added:

'(24) '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.';

(2) in Annex II, the title of Table 1 is replaced by the following: 'Energy efficiency classes of household dishwashers';

(3) in Annex IV, points 2, 3 and 4 are replaced by the following:

'2. CLEANING PERFORMANCE INDEX

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

The I_C is calculated as follows and rounded to three decimal places:

$$I_C = \exp (\ln I_C)$$

and

$$\ln I_C = (1/n) \times \sum^{n}_{i=1} \ln (C_{T,i}/C_{R,i})$$

where:

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

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

n is the number of test runs.

3. DRYING PERFORMANCE INDEX

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

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

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

and

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

where:

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

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

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

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

where:

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

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

4. LOW POWER MODES

Where applicable, the power consumption of the off mode (Po), standby mode (Psm) and delay start (Pds) are measured. The measured values are expressed in W and rounded to two decimal places.

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

-the display or not of information;

-the activation or not of a network connection.';

(4) in Annex V, Table 3 is replaced by the following:

'*Table 3*

Content, order and format of the product information sheet

Supplier's name or trade mark[a]:				
Supplier's address [a,c]:				
Model identifier[a]:				
General product parameters:				
Parameter	Value	Parameter	Value	
Rated capacity[b] (ps)	x	Dimensions in cm	Height	x
			Width	x
			Depth	x
EEI[b]	x,x	Energy efficiency class[b]	[A/B/C/D/E/F/G][d]	
Cleaning performance index[b]	x,xxx	Drying performance index[b]	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	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	x,x	

appliance is used.		of the water.	
Programme duration[b] (h:min)	x:xx	Type	[built-in/free-standing]
Airborne acoustical noise emissions (a) (dB(A) re 1 pW)	x	Airborne acoustical noise emission class[b]	[A/B/C/D][d]
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 [a,c]:

Additional information[a]:

Weblink to the supplier's website, where the information in point 6 of Annex II to Commission Regulation (EU) 2019/2022 is found[a,c]:

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

[b] for the eco programme.

[c] changes to these items shall not be considered relevant for the purposes of paragraph 4 of 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.

';

(5) in Annex VI, point 1 is replaced by the following:

'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 a list of all equivalent models, including model identifiers;

(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 4; 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 4;

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

(g) a list of all equivalent models, including model identifiers;

(h) the declared values of the parameters listed under Annex V if not covered by Table 4.

These elements shall also constitute the mandatory specific parts of the technical documentation that the supplier shall enter into the database, pursuant to point 5 of Article 12 of Regulation (EU) 2017/1369.

Table 4

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	X,XXX	kWh/cycle
Energy Efficiency Index (EEI)	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
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

’;

(6) Annex IX is amended as follows:

(a) the first paragraph is replaced by the following:

‘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. The values and classes published on the label or in the product information sheet shall not be more favourable for the supplier than the values declared in the technical documentation.’;

(b) point (7) is replaced as follows:

’(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 is taken on the non-compliance of the model according to points 3, 6 or the second paragraph of this Annex.’.

ANNEX VI

Annexes I, III, IV, V, VI and IX to Delegated Regulation (EU) 2019/2018 are amended as follows:

(1) in Annex I, the following point (28) is added:

'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.';

(2) in Annex III, Point 1.2, paragraph VIII, the first indent under the first item is replaced by the following:

'- 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 first decimal place, as set out in Table 4;';

(3) in Annex IV, Table 4, the following is added:

'

Category	Temperature class	Highest temperature of warmest M-package (°C)	Lowest temperature of coldest M-package (°C)	Highest temperature of all M-packages (°C)	Value for C
Vertical and combined supermarket cabinet	M0	≤ + 4	≥ - 1	n.a.	1,30
Horizontal supermarket cabinet	M0	≤ + 4	≥ - 1	n.a.	1,13

'.

(4) in Table 10 of Annex V, the cells on 'light source parameters' are be replaced by:

'

Light source parameters[a,b]:	
Type of light source	[Lighting technology]
Energy efficiency class	[A/B/C/D/E/F/G]

'.

(5) in Annex VI, point 1 is replaced by the following

'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 a list of all equivalent models, including model identifiers;

(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 11; 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 11;

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

(g) a list of all equivalent models, including model identifiers;

(h) the declared values of the parameters listed under annex V if not covered by Table 11.

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 (EU) 2017/1369.';

(6) Annex IX is amended as follows:

(a) the first paragraph is replaced by the following:

'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. The values and classes published on the label or in the product information sheet shall not be more favourable for the supplier than the values declared in the technical documentation.';

(b) point (7) is replaced by the following:

'(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, 6 or the second paragraph of this Annex. '.